

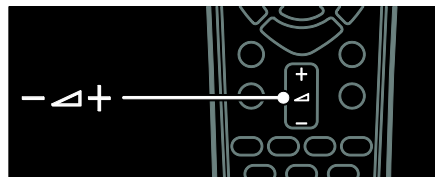
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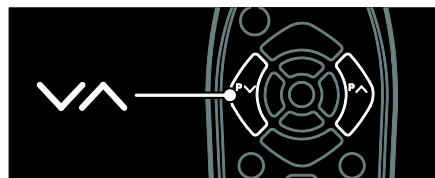
1 Get started

TV tour

Remote control



To adjust the volume.



To switch TV channels.



To open or close the **Menu**.

In the Menu, access connected devices, picture and sound settings, and other useful features.



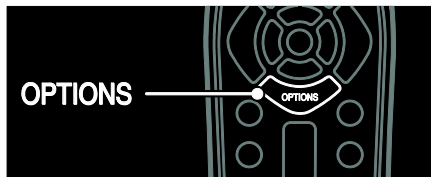
To open or close the **Source** menu.

In the Source menu, access connected devices.



To open or close the **Find** menu.

In the Find menu, access the channel list.



To open or close the **Options** menu.

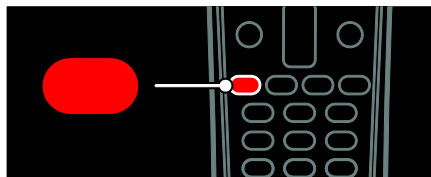
Options menus offer convenient settings for TV channels or programmes.



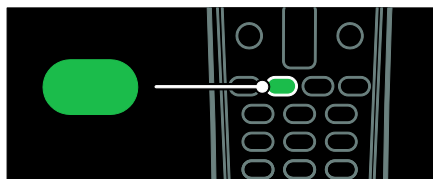
To return to the previous menu page.



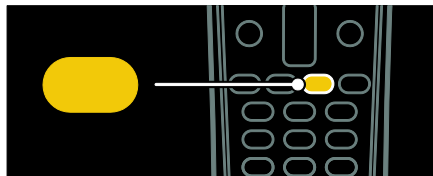
To exit from a menu or function.



To select a red menu option or watch TV demonstration clips.



To select a green menu option or to access energy efficient settings.



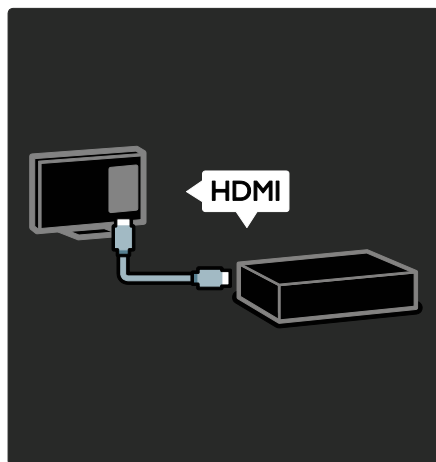
To select a yellow menu option or to access the electronic user manual.

Read more about the remote control in **Use your TV > Controls > Remote control** (Page 11).

Alternatively, look at the index in **Search for...**

Press **▲** to select the next TV tour.

Connect devices



For the best picture and sound quality, connect a DVD, Blu-ray disc player, or game console through HDMI (TM).

To watch a device, add it to the TV menu.

1. Press **MENU > [Add your devices]**.
2. Follow the onscreen instructions.

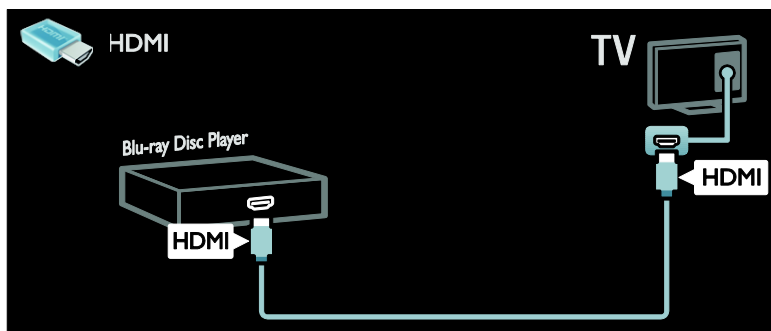
Note: If you are prompted to select the TV connection, select the connector that this device uses. See **Connect your TV > Connect devices** (Page 37) for information on connection.

If a Link operation or HDMI-Consumer Electronic Control (HDMI-CEC) compliant device is connected to the TV, it is automatically added to the TV menu when both devices are switched on.

To watch a connected device

1. Press **MENU**.
2. Select the newly added device icon.

You can learn more on device connections in **Connect your TV > Connect devices**.



High Definition TV

For high-definition (HD) picture quality, watch HD programmes.

On standard-definition (SD) programmes, the picture quality is standard.

You can watch HD video content in these ways and more:

- a Blu-ray disc player, connected with an HDMI cable, playing a Blu-ray disc
- an upscaling DVD player, connected with an HDMI cable, playing a DVD disc
- an over-the-air HD broadcaster (DVB-T MPEG4)
- a digital HD receiver, connected with an HDMI cable, playing HD content from a cable or satellite operator
- an HD channel on your DVB-C network
- an HD game console (for example, X-Box 360 or PlayStation 3), connected with an HDMI cable, playing an HD game

HD video clip

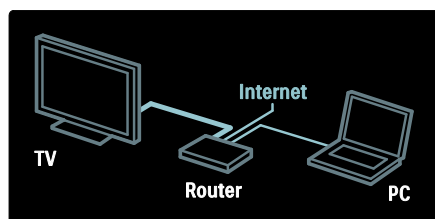
To experience the stunning sharpness and picture quality of HD TV, watch the HD video clip from the Home menu.

Press **MENU** > **[Setup]** > **[Watch demos]**.

Watch Demo is on the second page of the setup menu.

For more information about the availability of HD channels in your country, contact your SHARP dealer.

Network



Connect your TV to your home network to play music, photos, and videos from a computer or other media server on the same network.

Read more in **Connect your TV > Computers and the Internet** (Page 44).

AQUOS NET +

If your home network is connected to the Internet, you can connect your TV to AQUOS NET +, which offers movies, pictures, music and much more.

Read more in **Use your TV > Browse AQUOS NET +** (Page 18).

Important

Safety

Read and understand all instructions before you use your TV. If damage is caused by failure to follow instructions, the warranty does not apply.

Risk of electric shock or fire!

- Never expose the TV to rain or water. Never place liquid containers, such as vases, near the TV. If liquids are spilt on or into the TV, disconnect the TV from the power outlet immediately. Contact the SHARP service centre to have the TV checked before use.
- Never insert objects into the ventilation slots or other openings on the TV.
- When the TV is swivelled, ensure that no strain is exerted on the power cord. Strain on the power cord can loosen connections and cause arcing.
- Never place the TV, remote control or batteries near naked flames or other heat sources, including direct sunlight. To prevent the spread of fire, keep candles or other flames away from the TV, remote control and batteries at all times.



Risk of short circuit or fire!

- Never expose the remote control or batteries to rain, water or excessive heat.
- Avoid force coming onto power plugs. Loose power plugs can cause arcing or fire.

Risk of injury or damage to the TV!

- Two people are required to lift and carry a TV that weighs more than 25kg or 55lbs.
- When stand mounting the TV, use only the supplied stand. Secure the stand to the TV tightly. Place the TV on a flat, level surface that can support the combined weight of the TV and the stand.
- When wall mounting the TV, use only a wall mount that can support the weight of the TV. Secure the wall mount to a wall that can support the combined weight of the TV and wall mount. SHARP bears no responsibility for improper wall mounting that results in accident, injury or damage.
- Before you connect the TV to the power outlet, ensure that the power voltage matches the value printed on the back of the TV. Never connect the TV to the power outlet if the voltage is different.
- Parts of this product may be made of glass. Handle with care to avoid injury and damage.

Risk of injury to children!

Follow these precautions to prevent the TV from toppling over and causing injury to children:

- Never place the TV on a surface covered by a cloth or other material that can be pulled away.
- Ensure that no part of the TV hangs over the edge of the surface.
- Never place the TV on tall furniture, such as a bookcase, without anchoring both the furniture and TV to the wall or a suitable support.
- Educate children about the dangers of climbing on furniture to reach the TV.

Risk of swallowing batteries!

- The product/remote control may contain a coin-type battery, which can be swallowed. Keep the battery out of reach of children at all times!

Risk of overheating!

- Never install the TV in a confined space. Always leave a space of at least 4 inches or 10 cm around the TV for ventilation. Ensure that curtains or other objects never cover the ventilation slots on the TV.

Risk of injury, fire or power cord damage!

- Never place the TV or any objects on the power cord.
- To easily disconnect the TV power cord from the power outlet, ensure that you have full access to the power cord at all times.
- When you disconnect the power cord, always pull the plug, never the cable.
- Disconnect the TV from the socket and aerial before lightning storms. During lightning storms, never touch any part of the TV, power cord or aerial cable.

Risk of hearing damage!

- Avoid using earphones or headphones at high volumes or for prolonged periods of time.

Low temperatures

- If the TV is transported in temperatures below 5°C or 41°F, unpack the TV and wait until the TV temperature matches room temperature before connecting the TV to the power outlet.

Screen care

- Risk of damage to the TV screen! Never touch, push, rub or strike the screen with any object.
- Unplug the TV before cleaning.
- Clean the TV and frame with a soft damp cloth. Never use substances such as alcohol, chemicals or household cleaners on the TV.
- To avoid deformations and colour fading, wipe off water drops as soon as possible.

- Avoid stationary images as much as possible. Stationary images are images that remain onscreen for extended periods of time. Stationary images include onscreen menus, black bars, time displays, etc. If you must use stationary images, reduce screen contrast and brightness to avoid screen damage.

Environmental efforts

Energy efficiency

SHARP continuously focuses on lowering the environmental impact of our innovative consumer products. We aim our efforts towards environmental improvements during manufacturing, reduction of harmful substances, energy-efficient use, end-of-life instructions and product recycling.

To access energy efficient settings:

While you watch TV, press the **green** button on the remote control.

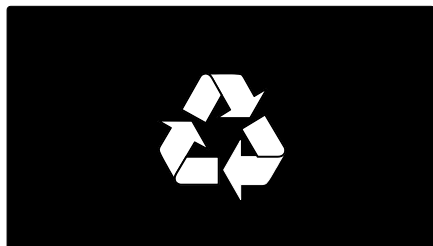
These energy-efficient settings include:

- **Energy saving picture settings:** You can apply a combination of energy saving picture settings. While you watch TV, press the **green** button and select **[Energy saving]**.
- **Power switch:** You can completely cut off power to the TV with the power switch. It is located at the base of the set.
- **Mute screen:** If you only want to listen to audio from the TV, you can turn off the TV display. Other functions continue to operate normally.
- **Light sensor:** The built-in ambient light sensor lowers the brightness of the TV screen when the surrounding light darkens.
- **Low standby power:** The advanced power circuitry brings down the power consumption of the TV to an extremely low level, without losing out on the constant standby functionality.

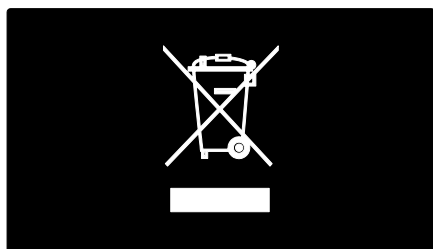
- **Power management:** The advanced power management of this TV ensures the most efficient use of its energy. To view how your personalised TV settings affect the TV's relative power consumption, press **MENU** and select **[Setup] > [Watch demos] > [Active contrast +]**.

End of use

Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.

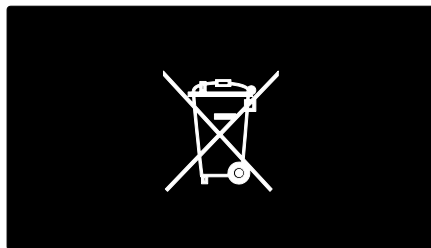


When this crossed-out wheeled bin symbol is attached to a product it means that the product is covered by the European Directive 2002/96/EC. Please inform yourself about the local separate collection system for electrical and electronic products.



Please act according to your local rules and do not dispose of your old products with your normal household waste. Correct disposal of your old product helps to prevent potential negative consequences for the environment and human health.

Your product contains batteries covered by the European Directive 2006/66/EC, which cannot be disposed of with normal household waste. Please inform yourself about the local rules on separate collection of batteries because correct disposal helps to prevent negative consequences for the environment and human health.



Position the TV

Placement

- Before you position the TV, read all safety precautions. See **Get Started > Important > Safety** (Page 6).
- Position the TV where light does not shine directly on the screen.
- The ideal distance from which to watch TV is three times its diagonal screen size. For example, if the diagonal screen size of the TV is 117cm / 46", the ideal viewing distance is ~3.5m / ~138" from the front of the screen.
- While seated, your eyes should be level with the centre of the screen.

Wall mount

To mount the TV, purchase a SHARP TV mount or a compatible TV mount. Check your TV screen size and match it against the list for the type of wall mount to purchase:

81 cm / 32 inches : 200mm x 200mm, M6

102 cm / 40 inches: 400mm x 400mm, M6

117 cm / 46 inches: 400mm x 400mm, M6

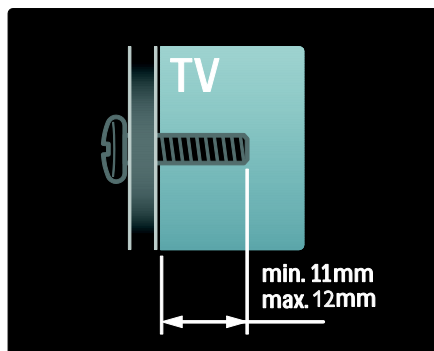
Warning: Follow all instructions provided with the TV mount. SHARP bears no responsibility for improper wall mounting that results in accident, injury or damage.

To prevent damage to cables and connectors, leave a gap of at least 5.5 cm / 2.2 inches from the back of the TV.

For 32 inch to 46 inch TVs:

Before you wall mount the TV, find the correct length of screw.

To find the length of screw, add the thickness of your wall mount to the screw length, as shown in the graphic.



Stand mount or wall mount

To apply the best settings for your TV, select wall mount or stand mount.

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Preferences] > [TV placement]**.
3. Select **[On a TV stand]** or **[Wall mounted]**, then press **OK**.

Location

A range of TV settings are applied to suit the location of the TV.

Shop or home mode

Set the TV location to **Home** mode to access all TV settings. In **Shop** mode, you can access only a few settings.

1. While you watch TV, press **MENU**.
2. Select **[Setup] > [TV settings] > [Preferences]**.
3. Select **[Location] > [Home]** or **[Shop]**, then press **OK**.
4. Restart the TV.

Help and support

Use Help

You can access onscreen **[Help]** from the TV menu by pressing the Yellow button.

You can also switch between the **[Help]** menu and the TV menu by pressing the Yellow button.

contact SHARP

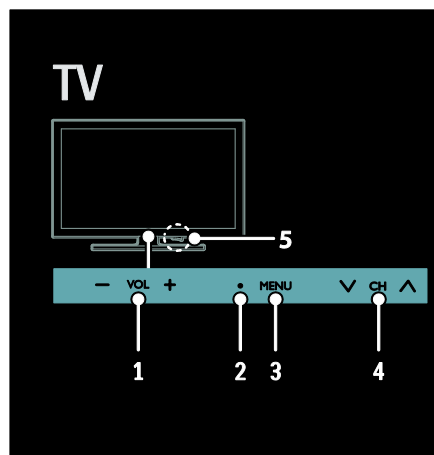
If you like, you can contact the SHARP service centre in your country for support. Contact information is available at www.sharp-eu.com.

Before you contact SHARP, note down your TV model and serial number. You can find this information on the back of your TV or on its packaging.

2 Use your TV

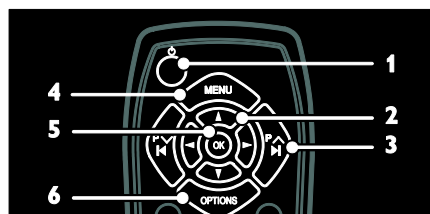
Controls

TV controls

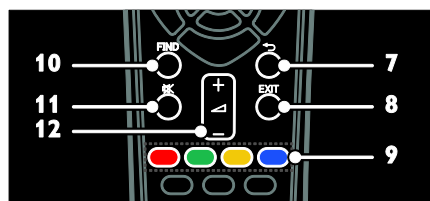


1. **VOL +/-**: Increase or decrease volume.
2. Remote control sensor and standby indicator.
3. **MENU**: Access the TV menu. Press again to launch an activity in the TV menu.
4. **CH V / ^**: Switch to the next or previous channel.
5. **Power**: Switch the TV on or off.

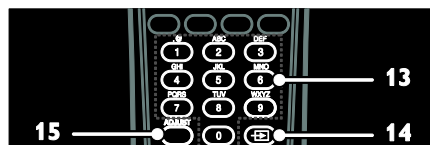
Remote control



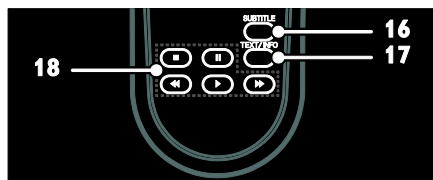
1. **⏻ (Standby)**: Switch the TV on or to standby.
2. **▲▼◀▶ (Navigation buttons)**: Navigate through menus and select items.
3. **◀ P/V / P/Δ ▶**: Switch channels, navigate through menu pages, tracks, albums or folders.
4. **MENU**: Access the TV menu.
5. **OK**: Confirm an entry or selection.
6. **OPTIONS**: Access options for the current activity or selection.



7. **↶ (Back)**: Return to the previous menu page.
8. **EXIT**: Exit from a menu or function.
9. **Colour buttons**: Select tasks or options. Not supported in MHEG mode.
10. **FIND**: Access the menu to select TV channel list.
11. **🔊**: Mute or restore audio.
12. **⏮ +/-**: Adjust volume.



13. **Alphanumeric buttons**: Select channels or enter values.
14. **TV SOURCE**: Select connected devices.
15. **ADJUST**: Access the menu to adjust settings.



16. SUBTITLE: Enable or disable subtitles.

17. TEXT: Enable or disable teletext.

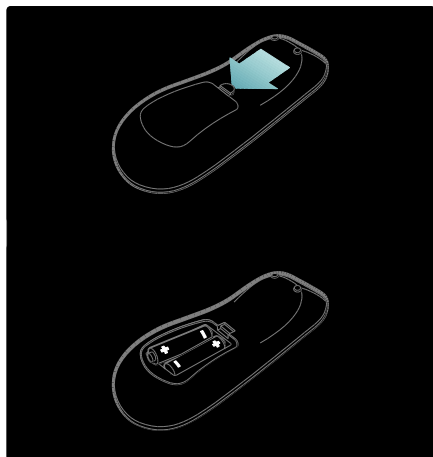
18. Play buttons: Control video or music play.

Batteries

If your remote control signal is weak, replace the batteries:

1. Open the battery cover.
2. Remove the old batteries from the battery compartment, and replace them with fresh batteries.

Make sure that the ends of the batteries line up correctly with the +/- markings in the battery compartment.



Note:

Dispose of batteries according to environmental directives. Read **Get started > Environmental efforts > End of use** (Page 8).

Remove batteries from the remote control if you will not use it for an extended period of time.

Link operation, controls

Link operation allows you to control your TV and other HDMI-CEC devices with one remote control.

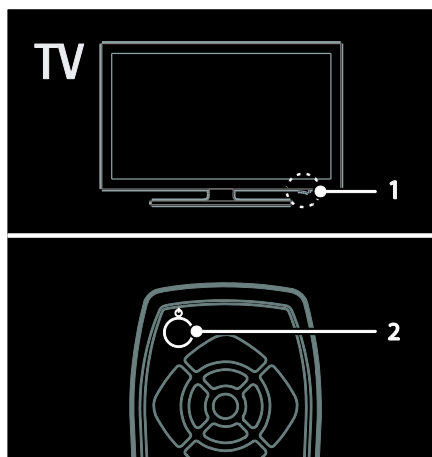
Access Link operation controls

1. While you view content from a connected HDMI-CEC device, press **OPTIONS**.
2. Select **[Show device keys]**, then press **OK**.
3. Select the Link operation control button, then press **OK**.

Read more on Link operation in **Use more of your TV > Use Link operation** (Page 27).

Watch TV

Switch TV on or off



Switch the TV on

- Press the power switch at the base of the TV to the **ON** position.
- If the TV is in standby, press **⏻** on the remote control.

Tip: If you cannot find your remote control and want to switch on the TV from standby, press **CH ∇/∧** on the front of the TV.

Though your TV consumes very little energy in standby, it does use some energy. If you are not going to use the TV for an extended period of time, switch it off to cut off the power.

Switch TV to standby

Press **⏻** on the remote control. The remote control sensor on the TV switches to red.

Switch off the TV

Press the power switch at the base of the TV to the **OFF** position.

The TV no longer consumes energy.

Note: If there is no user interaction (such as pressing a remote control button or a control on the front panel) for four hours, the TV will automatically switch to standby.

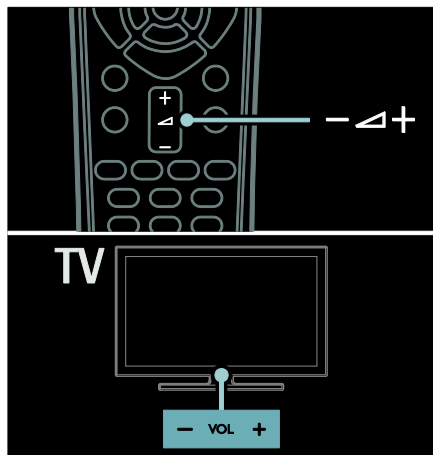
To disable automatic switch off:

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Preferences] > [Auto switch off] > [Off]**.

Adjust TV volume

Increase or decrease the TV volume

- Press **+/-** on the remote control.
- Press **VOL +/-** on the front of the TV.



Mute or unmute the TV volume

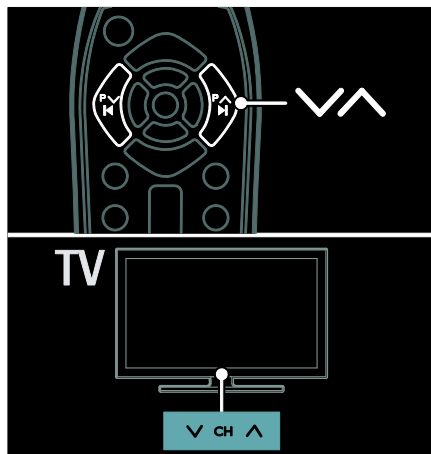
- Press **MUTE** to mute the TV, or
- Press **MUTE** again to restore the volume.

Adjust headphone volume

1. Press **MENU > [TV settings] > [Sound]**.
2. Select **[Headphones volume]**, then press **OK**.

Switch TV channels

- Press **PV / PΛ** on the remote control.
- Press **CH V/Λ** on the TV.
- Press the **Alphanumeric buttons** to enter a channel number.



Manage channel lists

You can view all channels, or only your favourites in the channel list.

Press **FIND** to access the channel list.

Create a channel list

You can create a channel list that contains only your favourite channels.

1. Press **FIND**.
2. Press **OPTIONS**.
3. Select **[Mark as favourite]** or **[Unmark as favourite]**, then press **OK**.

Select a channel list

1. In the channel list, press **OPTIONS**.
2. Select **[Select list] > [Favourites]** to display channels in the favourite list; or **[All]** to display all channels.
3. Press **OK** to confirm.

View only analogue or digital TV channels

You can filter the channel list to access only analogue or digital channels.

1. In the channel list, press **OPTIONS**.
2. Select **[Select list]** > **[Analogue]** or **[Digital]**, then press **OK**.

Depending on your selection, only analogue or digital channels are available.

Listen to digital radio

If digital radio channels are available, they are installed automatically when you install the TV channels.

1. While you watch TV, press **FIND**.
2. Select **[Channel list]**, then press **OK**.
3. In the channel list, press **OPTIONS**.
4. Select **[Select list]** > **[Radio]**, then press **OK**.
5. Select a radio channel, then press **OK**.

View Electronic Programme Guide

The Electronic Programme Guide (EPG) displays information about digital TV channels, for example:

- Channel schedules
- Synopsis of programmes

Note: Programme guides are available in certain countries only.

Access EPG

1. Press **MENU**.
2. Select **[EPG]**, then press **OK**.

Note: If you are viewing the programme guide for the first time, select **[Update EPG]** to update all available programmes.

Use EPG options

You can customise EPG information to remind you when programmes start, for example.

1. In EPG, press **OPTIONS**.
2. Select one of these settings, then press **OK**:
 - **[Set reminder]**: Set programme reminders.
 - **[Clear reminder]**: Clear programme reminders.
 - **[Change day]**: Select the day to display.
 - **[More info]**: Display programme information.

- **[Search by genre]**: Search TV programmes by genre.
- **[Scheduled reminders]**: List programme reminders.
- **[Update EPG]**: Update the latest programme information.

Use smart picture settings

Select your preferred picture setting.

1. While you watch TV, press **OPTIONS**.
2. Select **[Smart picture]**.
3. Select one of the following settings, then press **OK**:
 - **[Personal]**: Apply your customised picture settings.
 - **[Vivid]**: Rich and dynamic settings, ideal for daytime viewing.
 - **[Natural]**: Natural picture settings.
 - **[Cinema]**: Ideal settings for movies.
 - **[Game]**: Ideal settings for games.
 - **[Energy saving]**: Settings that conserve the most energy.
 - **[Standard]**: Default settings that suit most environments and types of video.
 - **[Photo]**: Ideal settings for photos.
 - **[Custom]**: Customise and store your personal picture settings. Select **Personal** to apply these settings.

Use smart sound settings

Select your preferred sound setting.

1. While you watch TV, press **OPTIONS**.
2. Select **[Smart sound]**.
3. Select one of the following settings, then press **OK**:
 - **[Personal]**: Apply your preferred setting in the **[Sound]** menu.
 - **[Standard]**: Settings that suit most environments and types of audio.
 - **[News]**: Ideal settings for spoken audio, such as the news.
 - **[Movie]**: Ideal settings for movies.
 - **[Game]**: Ideal settings for games.
 - **[Drama]**: Ideal settings for drama programs.
 - **[Sports]**: Ideal settings for sports.

Change picture format

Change the picture format to suit your preference.

1. Press **ADJUST**.
2. Select **[Picture format]**, then press **OK**.
3. Select a picture format, then press **OK** to confirm.

The available picture formats depend on the video source:

- **[Auto fill]**: Adjust the picture to fill the screen (subtitles remain visible). Recommended for minimal screen distortion but not for HD or PC.
- **[Auto zoom]**: Enlarge the picture to fill the screen. Recommended for minimal screen distortion but not for HD or PC.
- **[Super zoom]**: Remove the black bars on the sides of 4:3 broadcasts. Not recommended for HD or PC.
- **[Movie expand 16:9]**: Scale 4:3 format to 16:9. Not recommended for HD or PC.
- **[Wide screen]**: Stretch 4:3 format to 16:9.
- **[Unscaled]**: Provide maximum detail for PC. Only available when PC mode is enabled in the picture menu.

Watch a connected device

Add new device

Notes:

- Before you watch a connected device, you must add its icon to the TV menu. See **Connect your TV > Connect device** (Page 37).
- If you connect an HDMI-CEC compliant device to the TV, it is automatically added to the TV menu.

1. Connect and switch on the device.
2. Press **MENU**.
3. Select **[Add your devices]**, then press **OK**.

4. Follow the onscreen instructions.

- Select your device.
- Select the connector.

Note: If you are prompted to select the TV connection, select the connector that this device uses.

Select a source

From TV menu

After you have added the new device to the TV menu, select the new device icon to view its content.

1. Press **MENU**.
2. Select the device icon from the TV menu.
3. Press **OK** to confirm.

From Source menu

You can also press **↔ SOURCE** to display a list of connector names. Select the connector that connects the device to the TV.

1. Press **↔ SOURCE**.
2. Press the **Navigation buttons** to select a connector in the list.
3. Press **OK** to confirm.

Play from USB

If you have photos, videos or music files on a USB storage device, you can play the files on TV.

Caution: SHARP is not responsible if the USB storage device is not supported, nor is it responsible for damage or loss of data in the device.

Do not overload the USB port. If you connect an HDD device that consumes more than 500mA power, make sure that it is connected to its own external power supply.

Access the USB content browser as follows:

- While you watch TV, connect the USB device to the USB connector on the TV.
- Press **MENU**, select **[USB media]**, then press **OK**.

Watch video

Press the **Navigation buttons** to select a video file, then press **OK**.

- Press **◀◀** or **▶▶** to search forward or backward within a video.
- Press and hold **↶** to exit the content browser.

While you play video, press **OPTIONS** to access the following video options:

- **[Stop]**: Stop playback.
- **[Repeat]**: Repeat a video.
- **[Shuffle on]** / **[Shuffle off]**: Enable or disable random play of videos.

View picture

Press the **Navigation buttons** to select a picture, then press **OK**.

- To pause or stop play, press **OK**.
- To skip to the previous or next file, press **◀** or **▶**.
- Press and hold **↶** to exit content browser.

Press **OPTIONS** to access or exit the following picture options:

- **[Show info]**: Display the file information.
- **[Stop]**: Stop slideshow.
- **[Rotate]**: Rotate the file.
- **[Repeat]**: Repeat the slideshow.
- **[Play once]**: Play the file once.
- **[Shuffle off]** / **[Shuffle on]**: Enable or disable random display of pictures in the slideshow.
- **[Slideshow speed]**: Set the display time for each picture in the slideshow.
- **[Slideshow transition]**: Set the transition from one picture to the next.
- **[Set as Wall paper]**: Set the selected picture as wallpaper on TV.

Listen to music

Press the **Navigation buttons** to select a music track, then press **OK**.

- Press **◀◀** / **▶▶** to search forward or backward within a track.
- Press and hold **↶** to exit content browser.

Press **OPTIONS** to access or exit the following music options:

- **[Stop]**: Stop audio play.
- **[Repeat]**: Repeat a track or an album.
- **[Play once]**: Play the track once.
- **[Shuffle on]** / **[Shuffle off]**: Enable or disable random play of tracks.

Browse home network

What you can do

If you have photos, videos or music files stored on a computer connected through a home network, you can play the files on your TV.

What you need

- A wired or wireless home network, connected with a Universal Plug and Play (uPnP) router.
- A media server such as:
PC running **Windows Media Player 11** or higher; or
Mac running **Twonky Media Server**.
- Make sure that your computer firewall allows you to run the media server software program.

You will also need to set up the network connection:

- Connect your TV and the computer to the same home network. See **Connect your TV > Computers and the Internet** (Page 44)
- Switch on your computer and the router.

Proceed to set up a media sharing server with Windows Media Player 11 or higher, or Twonky Media Server.

Note: For help to use other media servers, such as TVersity, see the web site of the media server.

Enable sharing on Windows Media Player 11

1. Start **Windows Media Player** on your computer.
2. Select **Library > Media Sharing**.
 - The first time you select **Media Sharing**, a pop-up screen appears. Tick the **Share my media box** and click **OK**.
 - A device marked as **Unknown Device** appears in the **Media Sharing** screen. If the unknown device does not appear after a minute or so, make sure that your PC firewall is not blocking the connection.
3. From the **Media Sharing** screen, select the unknown device and click **Allow**.
A green tick appears next to the device.
 - By default, **Windows Media Player** shares files from these folders: **My Music**, **My Pictures**, and **My Videos**.
4. If your files are in other folders, select **Library > Add to Library**, and then follow the onscreen instructions to add the folders.
 - If necessary, select **Advanced options** to display a list of monitored folders.
5. Select **Library > Apply Media Information Changes** to activate the changes.

Enable sharing on Windows Media Player 12

1. Start **Windows Media Player** on your computer.
2. In **Windows Media Player**, select the **Stream** tab, and then select **Turn on media streaming**.
The **Media streaming** options screen appears.
3. Click **Turn on media streaming**.
Return to the Windows Media Player screen.
4. Click **Stream > More streaming options**.
 - The **Media streaming options** screen appears.
 - A media program appears in the local network screen. If the media programme does not appear, make sure that your PC firewall is not blocking the connection.

5. Select the media programme and click **Allowed**.

- A green arrow appears next to the media programme.
- By default, **Windows Media Player** shares files from these folders: **My Music**, **My Pictures**, and **My Videos**.

6. If your files are in other folders, select **Organize** tab and select **Manage libraries > Music**.

Follow the onscreen instructions to add the folders that contain your media files.

Enable sharing on Twonky Media

1. Visit www.twonkymedia.com to purchase the software, or download a free 30-day trial to your Macintosh.

2. Start **Twonky Media** on the Macintosh.

3. In the **Twonky Media Server** screen, select **Basic Setup** and **First steps**.

The **First steps** screen appears.

4. Type a name for your media server, and then click **Save changes**.

5. Back in the Twonky Media screen, select **Basic Setup > Sharing**.

6. Browse and select folders to share, and then select **Save Changes**.

Your Macintosh rescans the folders automatically so that they are ready to share.

Play files from computer

Note: Before you play multimedia content from the computer, make sure that the TV is connected to the home network, and the media server software is properly set up.

1. Switch on the computer and the router.

2. Switch on your TV.

3. Press **MENU** on the remote control.

4. Select **[Home network]**, then press **OK**. If the network installation starts, follow the onscreen instructions.

5. If the content browser is displayed, select a file, then press **OK**.

The file starts to play.

6. Press the **Play buttons** on the remote control to control play.

View pictures

- To play a picture slideshow, select a photo, then press **OK**.
- To pause or stop playback, press **OK** again.
- To play the previous or next file, press **◀** or **▶**.

Press **OPTIONS** to access one of the following options:

- **[Show info]**: Display the file information.
- **[Stop]**: Stop slideshow.
- **[Rotate]**: Rotate the file.
- **[Repeat]**: Repeat the slideshow.

Browse AQUOS NET +

What you can do

Enjoy Internet Applications (Apps), specially adapted internet websites for your TV. You can control the Apps with the TV remote control. For example, you can:

- Read newspaper headlines
- Watch videos
- Check weather forecasts

Use the catch-up TV feature to watch TV programmes that you missed. Availability of catch-up TV Apps differ for each country.

Notes:

- Each country has different AQUOS NET + services.
- Certain websites may not display completely. Some functions are not available, for example file download, or functions that require plug-ins.
- AQUOS NET + services are updated automatically. To view the latest updates, change **All** to **New** in the **App store**.
- AQUOS NET + displays one page at a time, in full screen.
- SHARP bears no responsibility regarding the content and the quality of the content provided by the content service providers.

What you need

To enjoy AQUOS NET +, complete these tasks:

1. On your home network, connect the TV to the Internet
2. On your TV, configure AQUOS NET +.

Notes:

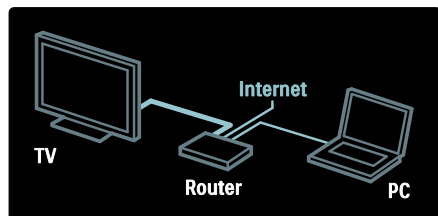
- You can lock AQUOS NET + Applications (Apps) with a 4 digit pin-code. All adult Apps can be locked as one selection.
- When you lock an adult services, the advertisements and Web pages not adapted for AQUOS NET + remain accessible.

Connect the TV to the Internet

On your home network, connect the following:

1. Connect a router with a high-speed connection to the Internet.
2. Switch on the router.
3. Install the network. See **Connect your TV**

> **Computers and the Internet** (see "Computers and the Internet" on page 44).



Configure AQUOS NET +

1. Press **MENU**, select **[AQUOS NET +]**, and then press **OK** to confirm.

The terms and conditions of use are displayed.

2. To agree to the terms and conditions, press **OK**.

Access AQUOS NET + apps

The first page shown is the AQUOS NET + home page. The icons on this page represent the applications (Apps).

- Browse Internet websites with the Internet Apps.
Press the **Navigation buttons** to select an App, then press **OK** to confirm.
- Access the App Gallery to add more Apps to your home screen.
- You can change country settings and select Apps from other countries.

Access website

1. Select an Internet App, then press **OK**.
2. Use the **Numeric buttons** on the TV remote control to enter a web address.

Onscreen keyboard

Select the area to enter the web address, then press **OK**.

A keyboard appears on the screen. Use this to enter a web address.

Clear AQUOS NET + memory

Warning: This option resets AQUOS NET+ completely.

You can clear the AQUOS NET + memory completely, including your favourites, the parental control code, passwords, cookies and history.

1. Press **MENU**.
2. Select **[Setup] > [Network settings]**.
3. Select **[Clear AQUOS NET + memory]**, then press **OK**.

Options

Press **OPTIONS** to select the following:

- Remove App
- Lock App
- Unlock App
- Move App

Show remote control

Keys such as play ►, rewind ◀◀ and fast forward ►► can be called up with **[Show remote control]**.

Press **OPTIONS** and select **[Show remote control]**. Use the onscreen keys to operate the connected audio or video player.

Select a key and press **OK** to carry out its function. Press **↵** to hide the onscreen keys.

Select **P+** and **P-** to scroll up and down on a web page.

Zoom page

To zoom in and out on an Internet page, press **OPTIONS** and select **[Zoom page]**. Use the slider bar to set the enlargement.

To scroll through an Internet page, use the **Navigation buttons** to jump from highlight to highlight.

Reload page

If a page does not load correctly, reload it. Press **OPTIONS** and select **[Reload page]**.

Security info

To view security information about a page, press **OPTIONS** and select **[Security info]**.

Rent online video

What you can do

With this TV, you can rent a video from an online video store.

1. Open a video store. You may need to register or enter your login.
2. Select a video.
3. Make the online payment.
4. Download a video.

What you need

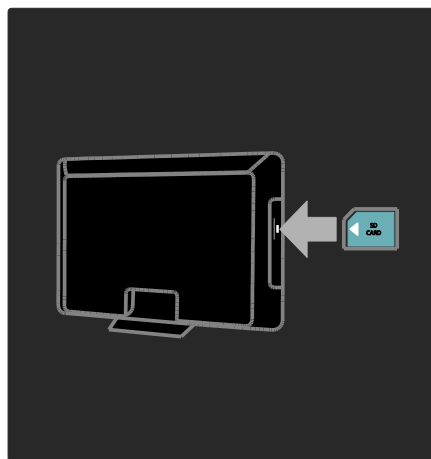
To rent and download a video, you need a high-speed Internet connection to the TV. Read more about network connections in **Connect your TV > Computers and the Internet** (Page 44).

You also need an SD memory card to insert into the TV SD card slot.

SD memory size

Use a blank SD memory card of type SDHC class 6, with at least 4 GB of storage capacity.

For high-definition video, make sure that you use an SDHC card with at least 8 GB of storage capacity.



Format an SD card

Before you download rented videos, your SD card must be formatted.

1. Switch on the TV.
2. As illustrated, insert the SD memory card into the SD card slot on the side of the TV. The TV automatically starts formatting the card.
3. After formatting, leave the SD card in the slot.

Rent

View a video store

1. Press **MENU**.
2. Select **[AQUOS NET +]** > **[Video Stores]** and press **OK**.

The video store page shows the available stores for your country.

3. To view a store, select its icon and press **OK**.

Rent a video

To rent a video, select its icon on the video store page and press **OK**. In most cases you can rent a video for one day or for a couple of days or even just 1 hour. The way you select and rent a video varies from store to store.

Payment

The store prompts you to log in or to open a new account if you do not have one. The login might consist of your email address and a personal PIN code. When you are logged in, you can select the payment method, a credit card, or a value code in most cases.

Consult the video store website for more information on its payment terms.

- To enter a number code (PIN), use the **Numeric buttons** on the remote control.
- To enter an email address, select the text field on the page and press **OK**. Select a character on the keyboard and press **OK** to enter.

Download the video

When you have paid, you can download the video on to the video memory. During the download, you can continue to watch a TV programme until the TV notifies you that the video is ready to play.

If you cancel a download, you can still download the video until the rental period expires.

Watch video

1. Press **MENU**, select **[AQUOS NET +]**.
2. Select **[Video Stores]**, then press **OK**.
3. With your log-in, enter the online store where you rented the video.
4. Select the video from the list of downloaded videos, then press **OK** to play.

3 Use more of your TV

Enjoy HbbTV

What you can do

Some broadcasters of digital channels offer interactive HbbTV (Hybrid Broadcast Broadband TV).

With HbbTV, broadcasters combine their normal TV programme with all kinds of information or entertainment. You can browse this information interactively. You can respond to a programme or vote, do online shopping or pay for a video-on-demand programme.

To fully enjoy HbbTV, you need to connect your TV to the Internet. Read more about connecting the TV to the Internet in **Connect your TV > Computers and the Internet** (see "Computers and the Internet" on page 44).

Note: You cannot download files to your TV with this feature.

Access HbbTV

When you tune to a TV channel that offers HbbTV, the interactive pages will open automatically or, at some point, you will be invited to open them.

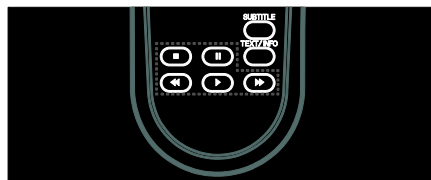
Depending on the broadcaster, you might need to press the red button or **OK** on the remote control to access the page.

To exit the HbbTV pages, select the relevant button on screen and press **OK**.

Navigate HbbTV pages

To navigate the HbbTV pages, you can use the navigation buttons, colour buttons, number buttons and the **↶** (**Back**) button.

While you watch videos within HbbTV pages, you can use **▶** (play), **⏸** (pause) and **■** (stop) buttons.



HbbTV text

Some broadcasters offer HbbTV Text, a new version of Text. Depending on the broadcaster, you might need an Internet connection to view HbbTV Text.

You can use the same remote control buttons to navigate HbbTV Text as you did to navigate HbbTV pages.

Block HbbTV

You can block HbbTV completely.

To block HbbTV, press **MENU**, select **[Setup] > [Channel settings] > [HbbTV]**.

View Teletext

Select a page

1. Select a channel that has teletext feature, then press **TEXT**.
2. Select a page in one of the following ways:
 - Enter the page number with the **Numeric buttons**.
 - Press **▲▼** or **◀▶** to view the next or previous page.
 - Press the **Colour buttons** to select a colour coded item.
3. Press **↵** to exit.

Teletext options

1. When you view teletext, press **OPTIONS**.
2. Select one of the following options:
 - **[Freeze page] / [Unfreeze page]:** Freeze or unfreeze the current page.
 - **[Dual screen] / [Full screen]:** Enable or disable dual screen teletext. Dual screen splits the current channel or source to the left of the screen, with teletext on the right.
 - **[T.O.P. overview]:** Table Of Pages (T.O.P.) teletext broadcasts allow you to jump from one subject to another without using page numbers.
 - **[Enlarge] / [Normal view]:** Zoom in on the page. Press the **Navigation buttons** to move around the enlarged view.
 - **[Reveal]:** Hide or reveal hidden information on a page, such as solutions to riddles or puzzles.
 - **[Cycle subpages]:** If subpages are available, each is shown automatically.
 - **[Language]:** Switch to a different language group to display different character sets correctly.
3. Press **OPTIONS** to exit.

Teletext language

Some digital TV broadcasters provide several teletext languages. You can set your primary and secondary language.

1. Press **MENU**.
2. Select **[Setup] > [Channel settings]** or **[Satellite settings]**.
3. Select **[Languages] > [Primary Text]** or **[Secondary Text]**.
4. Select your preferred teletext languages, then press **OK**.

Subpages

A teletext page can contain several subpages. These subpages are shown on a bar next to the main page number.

If subpages are available on a teletext page, press **◀** or **▶** to select them.

Search

1. When you view teletext, press **OK** to highlight the first word or number.
2. Press the **Navigation buttons** to skip to the word or number to search.
3. Press **OK** to begin the search.
4. Press **▲** until no word or number is highlighted to exit the search.

Digital teletext

Some digital TV broadcasters offer dedicated digital text or interactive services on their digital TV channels, for example, BBC1.

When in digital teletext:

- Press the **Navigation buttons** to select or highlight items.
- Press the **Colour buttons** to select an option, then press **OK** to confirm or activate.

Note: Digital text services are blocked when subtitles are broadcast and enabled on the TV. Read **Use more of your TV > View subtitles** (Page 25).

Teletext 2.5

Teletext 2.5 offers more colours and better graphics than normal teletext. If Teletext 2.5 is broadcast by a channel, it is switched on by default.

To switch Teletext 2.5 on or off

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Preferences]**.
3. Select **[Text 2.5] > [On]** or **[Off]**, then press **OK**.

Set locks and timers

Clock

You can display a clock on the TV screen. The clock displays the time that is broadcast by your TV service operator.

Display the TV clock

1. While you watch TV, press **OPTIONS**.
2. Select **[Status]**, then press **OK**.

The clock is displayed on the lower right hand corner of the TV screen.

Change the clock mode

The clock mode is automatically synchronised to the Coordinated Universal Time (UTC). If your TV cannot receive UTC transmissions, change the clock mode to **[Manual]**.

1. While you watch TV, press **MENU**.
2. Select **[Setup] > [TV settings] > [Preferences]**.
3. Select **[Clock] > [Auto clock mode]**.
4. Select **[Automatic]**, **[Manual]** or **[Country dependent]**, then press **OK**.

Enable or disable daylight saving

If clock mode is set to **[Country dependent]**, you can enable or disable daylight saving for your time zone.

1. In the **[Clock]** menu, select **[Daylight saving] > [Daylight saving time]** or **[Standard time]**, then press **OK**. Daylight saving is enabled or disabled.

Set the clock manually

If clock mode is set to **[Manual]**, set the date and time manually.

1. In the **[Clock]** menu, select **[Date]** or **[Time]**, then press **OK**.
2. Use the **Navigation buttons** to make your selection.
3. Select **[Done]**, then press **OK**.

Sleeptimer

Sleeptimer switches the TV to standby after a specified time. You can switch off your TV earlier or reset the sleeptimer during the countdown.

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Preferences] > [Sleeptimer]**.
3. Press the **Navigation buttons** to set the sleeptimer.
The sleeptimer can be set up to 180 minutes, in steps of five minutes. The sleeptimer is switched off if it is set to zero minutes.
4. Press **OK** to activate the sleep timer. The TV switches to standby after the specified time.

Child lock

To protect children from unsuitable TV programmes, you can lock the TV or block age rated programmes.

Set or change the child lock code

1. Press **MENU**.
2. Select **[Setup] > [Channel settings] > [Child lock]**.
3. Select **[Set code]**, or **[Change code]**.
4. Enter the code with the **Numeric buttons**.

Tip: If you forget your code, enter '8888' to override any existing codes.

Lock or unlock channels

1. In the child lock menu, select **[Channel lock]**.
2. Enter the child lock code with the **Numeric buttons**. The **[Channel lock]** menu appears.
3. Select channels to lock or unlock.

Parental rating

Some digital broadcasters rate their programmes according to age. You can set your TV to display only programmes with age ratings lower than your child's age.

1. Press **MENU**.
2. Select **[Setup]** > **[Channel settings]** or **[Satellite settings]**.
3. Select **[Child lock]** > **[Parental rating]**.

A message prompts you to enter the child lock code.

4. Enter the child lock code with the **Numeric buttons**.
5. Select an age rating, then press **OK**.

All programmes above the selected age rating are blocked.

For information on child lock codes, see **Use more of your TV > Set locks and timers > Child lock** (Page 24).

View subtitles

Analogue channels

1. Switch the TV to an analogue TV channel.
2. Press **TEXT**.
3. Enter the three-digit page number of the subtitles page (usually '888').
4. Press **↔** to exit teletext. Subtitles display if available.

Digital channels

1. Press **OPTIONS**.
2. Select **[Subtitles]**, then press **OK**.
3. Select **[Subtitles off]**, **[Subtitles on]** or **[On during mute]**, then press **OK**.

Note:

- If MHEG application is activated, subtitles are not displayed.
- If you select **[On during mute]**, subtitles are displayed only when you press **⏏** to mute the sound.

Subtitle language

You can change the subtitle language on some digital channels.

1. Press **MENU**.
2. Select **[Setup]** > **[Channel settings]** or **[Satellite settings]** > **[Subtitle language]**.
3. Select **[Primary subtitles]** or **[Secondary subtitles]** for the preferred language.
4. Press **OK** to confirm.

Tip: You can also press **OPTIONS** > **[Subtitle language]**.

View TV wallpaper

What you can do

You can display a default picture as the wallpaper on your TV. You can also load another picture as the wallpaper.

If the sleeptimer is off, the wallpaper is displayed for 240 minutes. Otherwise, it is displayed for the duration of the sleeptimer.

What you need

To use another picture as wallpaper, you need a USB storage device that contains a picture that is less than 1 MB in size.

Switch on

1. Press **MENU**.
2. Select **[Wall paper]**, then press **OK**.

The default picture is displayed.

Note: The wallpaper is displayed for the duration of the sleeptimer. For more information on sleeptimer, see **Use more of your TV > Set locks and timers > Sleeptimer** (Page 24).

Set TV Wallpaper

You can load another picture as wallpaper.

Note: Loading a new picture overrides the existing picture.

1. Connect the USB storage device to the TV.
2. Press **MENU**.
3. Select **[USB media]**, then press **OK**.
4. Select a picture, then press **OPTIONS**.
5. Select **[Set as Wall paper]**, then press **OK**.
6. Select **[Yes]**, then press **OK**.
7. Press any key to exit wallpaper.

Set universal access

Switch on

Some digital TV broadcasters provide special audio and subtitle features for people who are hearing or visually impaired.

To enable these features, turn on universal access in the preference menu.

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Preferences]**.
3. Select **[Universal access] > [On]**, then press **OK**.

Hearing impaired

Tip: To verify whether a hearing impaired audio language is available, press **OPTIONS** and select **[Audio language]**. Languages with an ear icon support hearing impaired audio.

To switch on hearing impaired audio and subtitles

1. While you watch TV, press **OPTIONS**.
2. Press one of the following buttons to select an option:
 - **Red:** Switch hearing impaired on or off.
 - **Green:** Switch on hearing impaired audio and subtitles.
3. Press **↩** to exit.

Visually impaired

Tip: To verify whether visually impaired audio is available, press **OPTIONS** and select **[Audio language]**. Languages with an eye icon support visually impaired audio.

To switch on visually impaired audio (if available)

1. While you watch TV, press **OPTIONS**.
2. Press the green button to select **[Visually impaired]**.
3. Press one of the following buttons to select an option:
 - **Red - [Off]:** Turn off visually impaired audio.
 - **Yellow - [Headphones]:** Hear visually impaired audio from headphones only. (if applicable)
 - **Green - [Speakers]:** Hear visually impaired audio from speakers only.
 - **Blue - [Speakers + headphones]:** Hear visually impaired audio from speakers and headphones only.
4. Press **↩** to exit.

Adjust volume for the visually impaired

1. In the **[Universal access]** menu, press the yellow button to select **[Mixed volume]**.
2. Press the **Navigation buttons** to move the slider up or down, then press **OK**.
3. Press **↩** to exit.

Audio feedback for the visually impaired

This feature enables audio feedback when buttons are pressed on the remote control or TV.

1. In the **[Universal access]** menu, press the blue button to select **[Key beep]**.
2. Press the green button to turn on audio feedback, or press the red button to turn it off.
3. Press **↩** to exit.

Use Link operation

What you can do

Get the most out of your HDMI-CEC-compliant devices with SHARP Link operation.


Note: Other brands describe HDMI-CEC functionality differently. Some examples are Philips EasyLink, Anynet (Samsung) or BRAVIA Sync (Sony). Not all brands are fully compatible with SHARP Link Operation.

After you switch on SHARP Link operation, these features are available:

One-touch play

When you play an HDMI-CEC compliant device, the TV switches on from standby, and switches to the correct source.

One-touch standby

When you press  on the TV remote control, the TV and all HDMI-CEC compliant devices switch to standby mode.

System audio control

If you connect an HDMI-CEC compliant device that includes speakers, you can choose to hear the TV from those speakers instead of the TV speakers.

For more information about TV audio output, see **Use more of your TV > Use Link operation > Select speaker output** (Page 28).

Link operation remote control

You can control multiple HDMI-CEC compliant devices with your TV remote control.

To switch on Link operation remote control, see **Use more of your TV > Use Link operation > Control devices simultaneously** (Page 28).

Retain picture quality

If your TV picture quality is affected by the picture-processing features of other devices, switch on Brilliant colour processor +.

To switch on Brilliant colour processor +, see **Use more of your TV > Use Link operation > Retain picture quality** (see "Retain picture quality" on page 29).

Maximize display for subtitled video

While you view subtitles in a video, you can maximize the video display area. Some subtitles can create a separate subtitle bar under the video, which limits the video display area. After you switch on auto subtitle shift, the subtitles display on top of the video image, which maximizes the video display area.

To switch on auto subtitle shift, see **Use more of your TV > Use Link operation > Maximise display for video with subtitles** (Page 29).

Hear another device at standby

You can hear a connected HDMI-CEC compliant device through the TV speakers, even when the TV is in standby.

To switch on, see **Use more of your TV > Use Link operation > Hear another device at TV standby** (see "Hear another device at TV standby" on page 29).

What you need

To benefit from SHARP Link operation advanced control features, make sure that you do the following:

- Connect at least two HDMI-CEC compliant devices through HDMI
- Configure each HDMI-CEC compliant device properly
- Switch on Link operation

Switch on

To switch on or off Link operation

Note: If you do not intend to use Link operation, switch it off.

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Link operation]**.
3. Select **[On]** or **[Off]**, then press **OK**.

Control devices simultaneously

If you connect multiple HDMI-CEC devices that support this setting, all the devices respond to the TV remote control.

Caution: This is an advanced setting. Devices that do not support this setting will not respond to the TV remote control.

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Link operation]**.
3. Select **[Link operation remote control] > [On]** or **[Off]**.
4. Press **OK** to activate.

- **Notes:**
 - To switch back to TV control, press **MENU**, then select **[Watch TV]**.
- To control another device, press **MENU**, then select the device from the TV menu.
- To exit, press **↵**.

Link operation buttons

Control HDMI-CEC compliant devices with the following buttons on the TV remote control.

- **OK:** Start, pause or resume play on the connected device, activate a selection, or access the device menu.
- **◀ (Previous) / ▶ (Next):** Search backwards and forwards on the connected device.
- **Alphanumeric buttons:** Select a title, chapter or track.
- **Play buttons:** Control video or music play.
- **Standby:** Display the menu of the connected device.
- **MENU:** Display the TV menu.
- **⏻ (Standby):** Switch the TV and the connected device to standby.

Other Link operation buttons are available through the On-Screen Remote Control (OSRC).

To access the OSRC

1. While you view content from a connected device, press **OPTIONS**.
2. Select **[Show device keys]**, then press **OK**.
3. Select an onscreen button, then press **OK**.
4. Press **↵** to exit.

Select speaker output

If the connected device is HDMI Audio Return Channel (HDMI ARC) compliant, you can output TV audio through an HDMI cable. An additional audio cable is not required. See **Connect your TV > About cables > HDMI** (Page 36)

Configure TV speakers

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Link operation] > [TV speakers]**.
3. Select one of the following options, then press **OK**:
 - **[Off]:** Switch off TV speakers.
 - **[On]:** Switch on TV speakers.
 - **[Link operation]:** Stream TV audio through the connected HDMI-CEC device. Switch the TV audio to the connected HDMI-CEC audio device through the adjust menu.
 - **[Link operation autostart]:** Turn off TV speakers automatically and streams TV audio to the connected HDMI-CEC audio device.

Select speaker output with Adjust menu

If **[Link operation]** or **[Link operation autostart]** are selected, access the adjust menu to switch the TV audio.

1. While you watch TV, press **ADJUST**.
2. Select **[Speakers]**, then press **OK**.
3. Select one of the following, then press **OK**:
 - **[TV]:** On by default.
Stream TV audio through TV and the connected HDMI-CEC audio device until the connected device switches to system audio control. TV audio is then streamed through the connected device.

- **[Amplifier]:** Stream audio through the connected HDMI-CEC device. If system audio mode is not enabled on the device, audio continue to stream from the TV speakers. If **[Link operation autostart]** was enabled, the TV prompts the connected device to switch to system audio mode.

Retain picture quality

If your TV picture quality is affected by the picture-processing features of other devices, switch on Brilliant colour processor +.

To switch on Brilliant Colour Processor+

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Link operation]**.
3. Select **[Brilliant Colour Processor +] > [On]**, then press **OK**.

Maximize video display

Some subtitles can create a separate subtitle bar under the video, which limits the video display area. After you switch on auto subtitle shift, the subtitles display over the video image, which maximises the video display area.

Switch on auto subtitle shift

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Link operation] > [Auto subtitle shift]**.
3. Select **[On]**, then press **OK** to activate.

Note: Make sure that the picture format of the TV is set to **[Auto format]** or **[Movie expand 16:9]**.

Hear another device at TV standby

You can hear a connected HDMI-CEC compliant device through the TV speakers, even when the TV is in standby.

1. Press **ADJUST** to receive audio from the connected SHARP Link operation device. If available, audio only mode is enabled.
2. Accept the prompt on the TV to turn off the TV screen.
3. Control the audio playback with the TV remote control.

4 Set up your TV

Settings assistant

Use the settings assistant to guide you through the picture and sound settings.

1. While you watch TV, press **MENU**.
2. Select **[Setup]** > **[Quick picture and sound settings]**, then press **OK**.
3. Select **[Start]**, then press **OK**.
4. Follow the onscreen instructions to choose your preferred settings.

Picture and sound

More picture settings

1. Press **MENU**.
2. Select **[Setup]** > **[TV settings]** > **[Picture]**, then press **OK**.
3. Select a setting to adjust:
 - **[Smart picture]**: Access predefined smart picture settings.
 - **[Reset]**: Reset to default settings.
 - **[Contrast]**: Adjust the intensity of the bright areas, keeping dark areas unchanged.
 - **[Brightness]**: Adjust the intensity and details of the dark areas.
 - **[Colour]**: Adjust colour saturation.
 - **[Hue]**: Compensate colour variations in NTSC encoded transmissions.
 - **[Sharpness]**: Adjust sharpness in the image.
 - **[Noise reduction]**: Filter and reduce noise in the image.
 - **[Tint]**: Adjust the colour balance in the image.
 - **[Custom tint]**: Customise tint setting.
 - **[Brilliant Colour Processor +]**: Access advanced settings, including **[Fine motion]**, **[100Hz double frame driving]**, **[Advanced sharpness]**, **[Dynamic contrast]**, **[Dynamic backlight]**, **[MPEG artefact reduction]**, **[Colour enhancement]**, **[Gamma]**.

- **[PC mode]**: Allow picture settings to be changed when a PC is connected to the TV through HDMI. If enabled, you can select **[Picture format]** > **[Unscaled]** which provides maximum detail for display of PC content.
- **[Light sensor]**: Adjust settings dynamically to match lighting conditions.
- **[Picture format]**: Change the picture format.
- **[Screen edges]**: Change the picture size.
- **[Picture shift]**: Adjust the position of the picture. You cannot select this setting if the selected picture format is **Auto zoom** or **Wide screen**.

More sound settings

1. Press **MENU**.
2. Select **[Setup]** > **[TV settings]** > **[Sound]**, then press **OK**.
3. Select a setting to adjust:
 - **[Smart sound]**: Access predefined smart sound settings.
 - **[Reset]**: Reset to factory default settings.
 - **[Bass]**: Adjust the bass level.
 - **[Treble]**: Adjust the treble level.
 - **[Surround]**: Enable spatial sound.
 - **[Headphones volume]**: Adjust headphone volume.
 - **[Auto volume leveling]**: Automatically reduce sudden volume changes, for example when switching channels.
 - **[Balance]**: Adjust the balance of the left and right speakers.

Audio settings

Select audio language

If the TV channel has multiple or dual sound broadcast, you can select the preferred audio language.

While you watch TV, press **OPTIONS**.

- **[Audio language]**: Select the audio language for digital channels.
- **[Dual I-II]**: Select the audio language for analogue channels.

Digital TV channels can stream several audio languages. If multiple languages are available, select the preferred language.

1. Press **MENU**.
2. Select **[Setup]** > **[Channel settings]** or **[Satellite settings]** > **[Language]**.
3. Select one of the following settings, then press **OK**:
 - **[Primary audio]** / **[Secondary audio]**: Select the available audio language. Set a secondary language in the same menu. If the primary language is unavailable, the TV receives this language.
 - **[Preferred audio format]**: Select to receive standard audio format (MPEG) or advanced audio formats (AAC, EAC-3 or AC-3 if available).
 - **[Mono/Stereo]**: Select mono or stereo audio if stereo broadcasting is available.
4. Press **↩** to exit.

Reset to factory settings

You can restore default picture and sound settings, while the channel installation settings remain the same.

1. While you watch TV, press **MENU**.
 2. Select **[Setup]** > **[TV settings]** > **[Factory settings]**, then press **OK**.
- TV settings are reset to default.

Channels

Reorder and rename

Reorder channels

After the channels are installed, you can reorder the channel list to your preference.

1. While you watch TV, press **FIND**. The channel list is displayed.
2. Select the channel to reorder and press **OPTIONS**.
3. Select **[Reorder]**, then press **OK**.
4. Press the **Navigation buttons** to move the highlighted channel to another location, then press **OK**.
5. Select one of the following options, then press **OK**.
 - **[Insert]**: Insert the channel into the desired location.
 - **[Swap]**: Swap location with another channel.
6. Once complete, press **OPTIONS** and select **[Exit]**.

Rename channels

After the channels are installed, you can rename them to your preference.

1. While you watch TV, press **FIND**. The channel list is displayed.
2. Select the channel to rename and press **OPTIONS**.
3. Select **[Rename]**, then press **OK**.
4. In the entry screen, press the **Navigation buttons** or **Numeric buttons** to edit the name, then press **OK**.

Tip: You can press **OK** in the entry screen to enable the **Onscreen Keyboard**.

5. Once complete, press the **Navigation buttons** to select **[Done]**.
 - To clear the entry, select **[Clear]**.
 - To cancel, select **[Cancel]**.
6. Press **OK** to confirm.
7. Press **↩** to exit.

Hide or unhide

Hide channels

To prevent unauthorised access to channels, hide them from the channel list.

1. While you watch TV, press **FIND**.
2. Select the channel to rename and press **OPTIONS**.
3. Select **[Hide channel]**, then press **OK**.
The channel is hidden.

Unhide channels

1. While you watch TV, press **FIND**.
2. Press **OPTIONS**.
3. Select **[Show hidden channels]**, then press **OK**.
Hidden channels appear in the channel list, but the channel information is not displayed.
4. Select a radio channel, then press **OPTIONS**.
5. Select **[Unhide all]**, then press **OK**. All hidden channels are displayed.

Update channel list

When the TV was switched on for the first time, a full installation of channels was performed.

You can automatically add or remove digital channels or manually update channels.

Note: If you are prompted to enter a code, enter '8888'.

Automatic update

To automatically add or remove digital channels, leave the TV in standby mode. The TV updates channels and stores new channels everyday. Empty channels are removed from the channel list.

If a channel update is performed, a message appears at startup.

If you do not want this message to appear

1. Press **MENU**.
2. Select **[Setup] > [Channel settings]** or **[Satellite settings]**.
3. Select **[Channel installation] > [Channel update message]**.
4. Select **[Off]**, then press **OK**.

To disable automatic updates

In the **[Channel installation]** menu, select **[Automatic channel update] > [Off]**.

Automatic install

When the TV was switched on for the first time, a full installation of channels was performed. You can run this full installation again to set your language, country and install all available TV channels.

1. Press **MENU**.
2. Select **[Setup] > [Search for channels]** or **[Search for satellite]**, then press **OK**.
3. Follow the onscreen instructions to complete the channel installation.
4. Once complete, select **[Finish]**, then press **OK**.

Tip: Press **FIND** to see the channel list.

- **Notes:**
- During installation, leave settings unchanged unless your digital provider gives you the specific values to enter.
- When digital TV channels are found, the list of installed channels may display empty channel numbers. You can rename, reorder or uninstall these channels.

Access DVB-C or DVB-T channels

If you have installed both DVB-C and DVB-T channels, you have to switch to the respective network to watch channels on that network.

1. While you watch TV, press **MENU**.
2. Select **[Setup] > [Channel settings]**.
3. Select **[Channel installation] > [Antenna or Cable DVB]**.
4. Select one of the following settings:
 - **[Antenna (DVB-T)]:** Access free-to-air antenna or digital DVB-T channels.
 - **[Cable]:** Access cable or digital DVB-C channels.
5. Press **OK** to confirm.
6. Press **↩** to exit.

Access DVB-S channels (for certain models only)

If your satellite is connected to the SAT connector, you can receive satellite channels. Press **MENU > [Watch satellite]** to watch satellite channels.

Install analogue channels

You can search and store analogue TV channels manually.

Step 1: Select your system

Note: Skip this step if your system settings are correct.

1. While you watch TV, press **MENU**.
2. Select **[Setup] > [Channel settings] > [Channel installation]**.
3. Select **[Analogue: Manual installation] > [System]**, then press **OK**.
4. Select the system for your country or region, then press **OK**.

Step 2: Search and store new TV channels

1. In the **[Analogue: Manual installation]** menu, select **[Find channel]**, then press **OK**.
2. Select one of the following options:
 - Press the **Navigation buttons** or **Numeric buttons** to manually enter the channel frequency.
 - Select **[Search]** then press **OK** to search for the next channel automatically.
3. When the correct channel frequency is entered, select **[Done]**, then press **OK**.
4. Select **[Store as new channel]**, then press **OK** to store the new TV channel.

Install digital and satellite channels

Install digital channels

To improve TV reception, reposition the antenna. You need to know the correct frequency to tune. For best results, contact the service provider or get a professional installer.

1. Press **MENU**.
2. Select **[Setup] > [Channel settings] > [Channel installation]**.
3. Select **[Digital: Reception test] > [Search]**, then press **OK**.
4. Press the **Numeric buttons** to enter the channel frequency.
5. Select **[Search]**, then press **OK**.
6. When the correct channel is located, select **[Store]**, then press **OK**.
7. Press **↩** to exit.

Notes

- If the reception is poor, reposition your antenna and repeat the procedure.
- If you receive the channel with DVB-C, select **[Automatic]** in **[Symbol rate mode]** unless your cable provider supplies you with a specific symbol rate value.

Install satellite channels

Available on certain models only.

If your satellite is connected to the SAT connector, you can receive satellite channels.

1. While you watch TV, press **MENU**.
2. Select **[Setup] > [Search for satellite] > [Reinstall channels]**.
3. Follow the onscreen instructions to complete the installation.
4. Once complete, select **[Finish]**, and then press **OK**.

Fine-tune channels

If the reception of an analogue TV channel is poor, fine-tune the TV channel.

1. Press **MENU**.
2. Select **[Setup] > [Channel settings] > [Channel installation]**.
3. Select **[Analogue: Manual installation] > [Fine tune]**, and then press **OK**.
4. Press **▲** or **▼** to fine-tune the channel.
5. When you have selected the correct channel frequency, select **[Done]**, and then press **OK**.
6. Select one of the following options, then press **OK**.
 - **[Store current channel]**: Store the channel as the current channel number.
 - **[Store as new channel]**: Store the channel as a new channel number.

Menu language

1. While you watch TV, press **MENU**.
2. Select **[Setup] > [TV settings] > [Preferences] > [Menu language]**.
3. Select a menu language from the list, then press **OK**.

Other settings

TV demo

Start a demo to find out more about your TV's features.

Note: Demos are not supported on MHEG channels.

1. While you watch TV, press **MENU**.
2. Select **[Setup] > [Watch demos]**, then press **OK**.
3. Select a demo, then press **OK**.
4. Press **↩** to exit.

Update software

TV software

Check software version

1. Press **MENU**.
 2. Select **[Setup] > [Software settings] > [Current software info]**, then press **OK**.
- The version of the current software is displayed.

Update the software through one of these options:

- Update with USB flash drive
- Update from digital broadcast
- Update from the Internet

For more information, see the following pages.

Update with USB

Before performing this procedure, make sure that you have the following:

- Spare time to complete the entire update.
- A USB flash drive that has at least 256MB of storage space, is FAT or DOS formatted, and has its write protection disabled.
- Access to a computer with a USB port and internet access.

1. Press **MENU**.
 2. Select **[Setup] > [Update software]**, then press **OK**.
- The update assistant starts.
3. Follow the onscreen instructions to start the update.

Update from the Internet

To update the TV software directly from the Internet, connect the TV to the Internet through a router with a high-speed connection.

1. Press **MENU > [Setup] > [Update software]** and press **OK**.
2. Select **[Internet]** and press **OK**.
3. Follow the onscreen instructions .

When the update is complete, the TV switches off and back on again automatically. Wait for the TV to switch back on; do not use the power switch on the TV.

Note: If the TV is connected to the Internet, the TV displays the availability of new software at startup.

Update from digital broadcast

If available, your TV can receive software updates through digital broadcasts. If an update is available, a message appears prompting you to update the software. We strongly recommend that you update the software when prompted.

Note: If you choose to update the software at a later time, select **MENU > [Setup] > [Software settings] > [Local updates]**.

Reinstall the TV

Reinstall your TV to reset all picture and sound settings and reinstall all TV channels.

1. Press **MENU**.
2. Select **[Setup] > [TV settings] > [Reinstall TV]**, then press **OK**.
3. Follow the onscreen instructions.

5 Connect your TV

About cables

Cable quality

Overview

Before you connect devices to the TV, check the available connectors on the device. Connect the device to the TV with the highest quality connection available. Good quality cables ensure a good transfer of picture and sound.

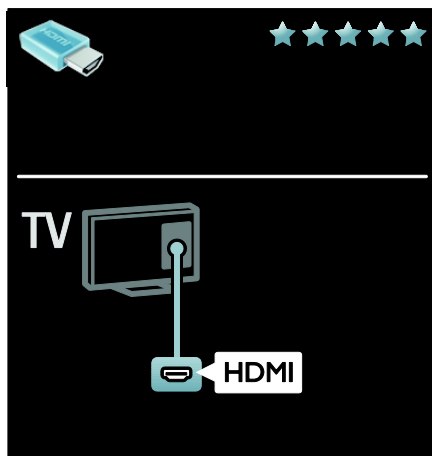
The connections shown in this user manual are recommendations only. Other solutions are possible.

Tip: If your device only has composite video or RCA connectors, use a SCART-cinch adapter to connect the device to a SCART connector on the TV.

HDMI

An HDMI connection has the best picture and sound quality.

- An HDMI cable combines video and audio signals. Use HDMI for high-definition (HD) TV signals, and to enable Link operation.
- An HDMI Audio Return Channel (ARC) connector allows output of TV audio to an HDMI ARC compliant device.
- Do not use an HDMI cable longer than 5 meters / 16.4 feet.

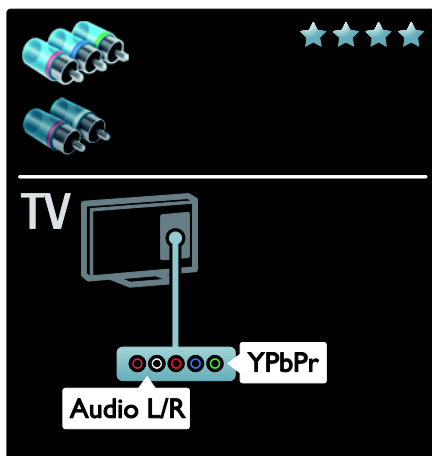


Y Pb Pr - Component video

Use the Component Video (Y Pb Pr) connection together with an Audio Left and Right connection for sound.

Y Pb Pr can handle high-definition (HD) TV signals.

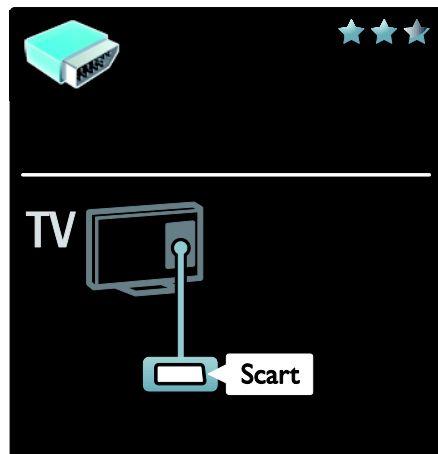
Match the Y Pb Pr connector colours to the cable plugs.



SCART

A SCART cable combines video and audio signals.

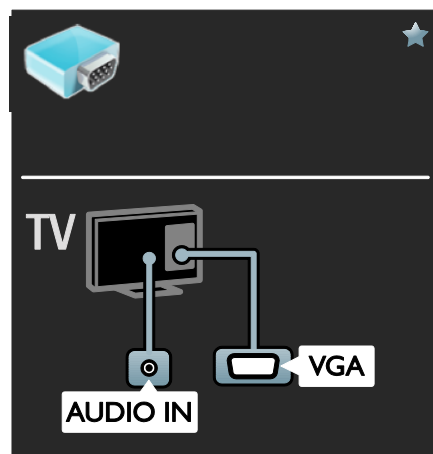
SCART connectors can handle RGB video signals but cannot handle high-definition (HD) TV signals.



VGA

Use this connection to display PC content on the TV.

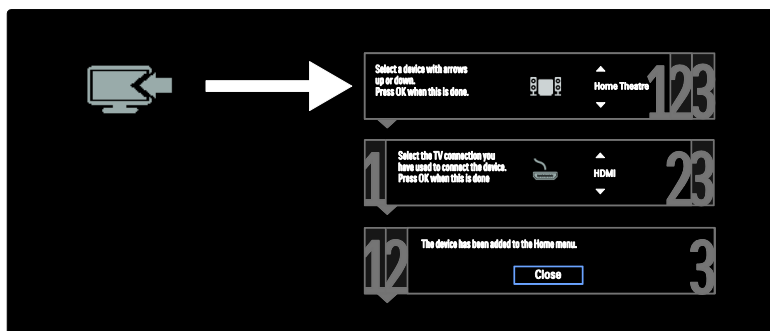
For video and sound, use the VGA and AUDIO IN connectors.



Connect devices

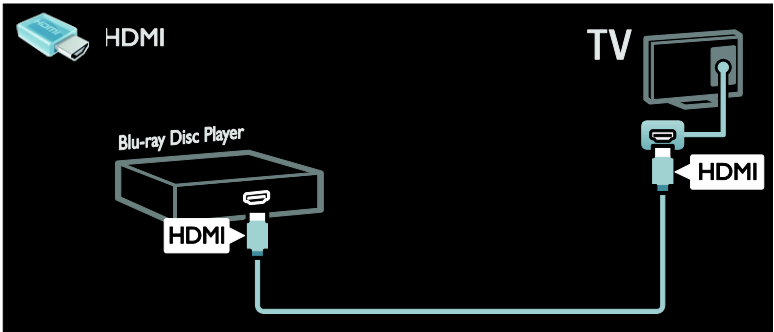
Overview

You can connect your devices to the TV with any of the following options. After connection, press MENU > [Add your devices].

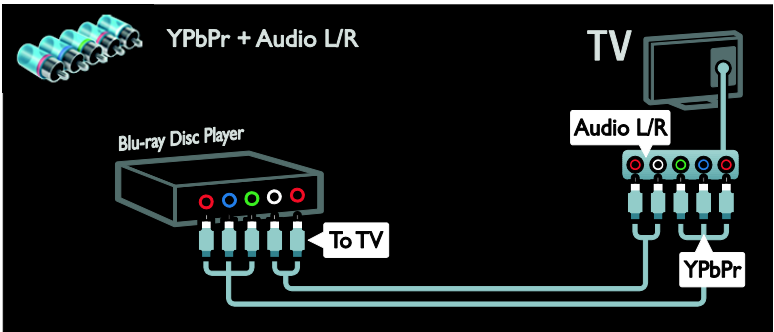


Blu-ray or DVD disc player

Connect the disc player with an HDMI cable to the TV.

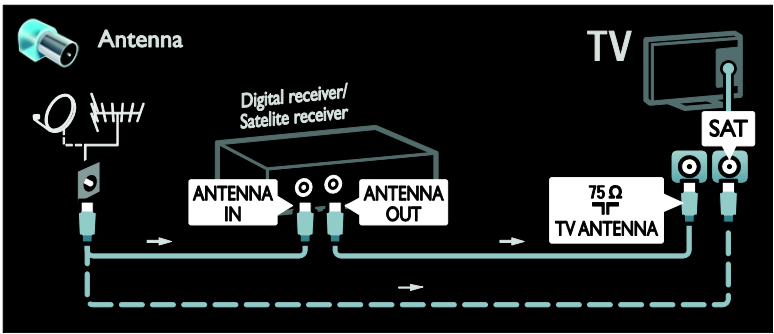


Connect the disc player with a component cable (Y Pb Pr) and an audio L/R cable to the TV.

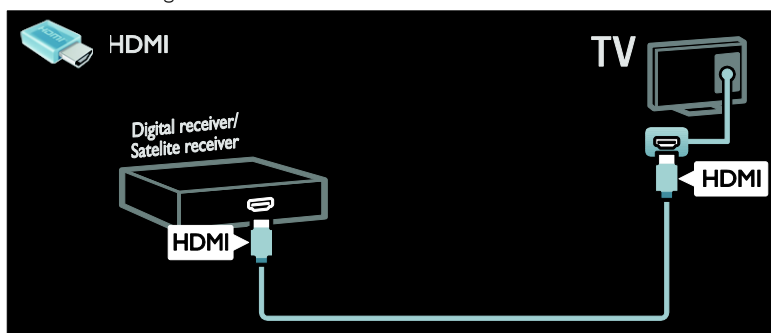


TV receiver

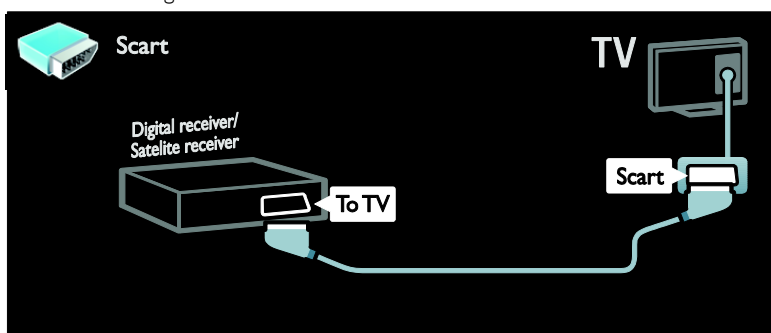
Connect the satellite or digital TV receiver with an antenna cable to the TV. (SAT is available on certain models only.)



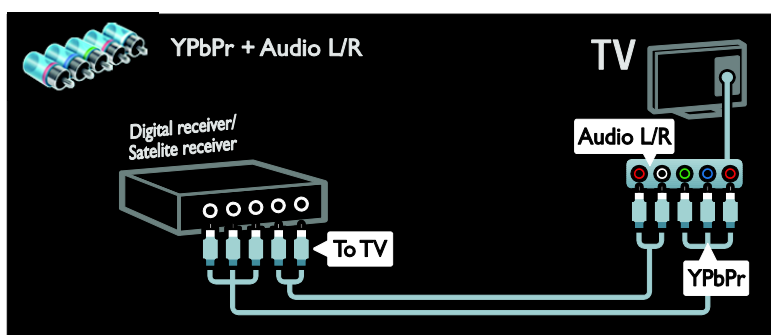
Connect the satellite or digital TV receiver with an HDMI cable to the TV.



Connect the satellite or digital TV receiver with a SCART cable to the TV.

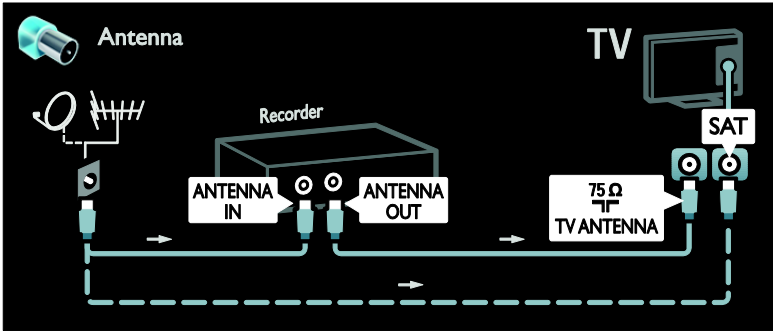


Connect the satellite or digital TV receiver with a component cable (Y Pb Pr) and an audio L/R cable to the TV.

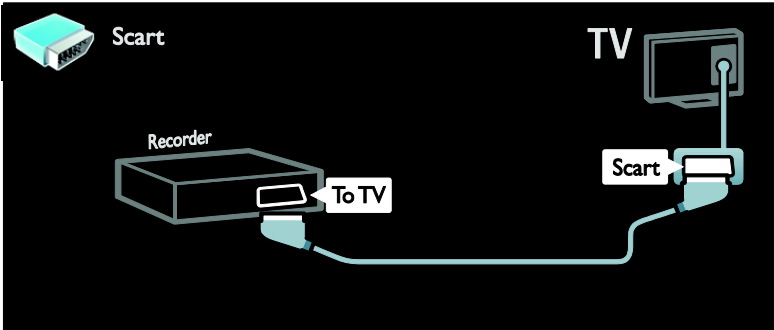


Recorder

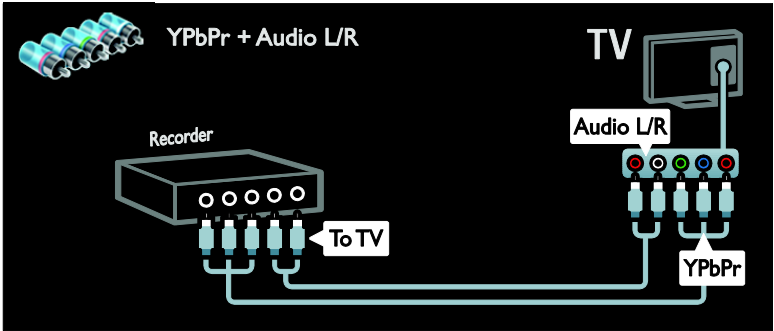
Connect the recorder with an antenna cable to the TV. (SAT is available on certain models only.)



Connect the recorder with a SCART cable to the TV.



Connect the recorder with a component cable (Y Pb Pr) and an audio L/R cable to the TV.



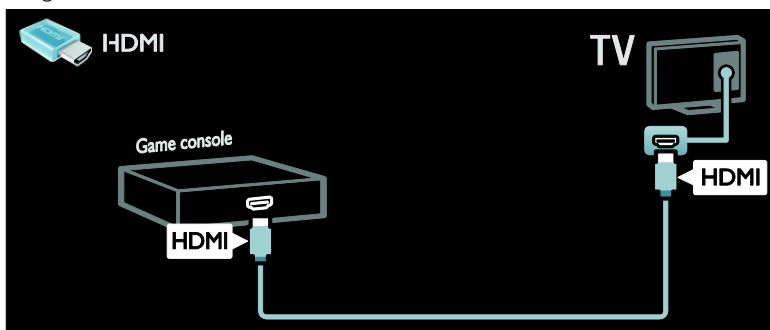
Game console

The most practical connectors for a game console are on the side of the TV. However, you can also use the connectors at the back of the TV.

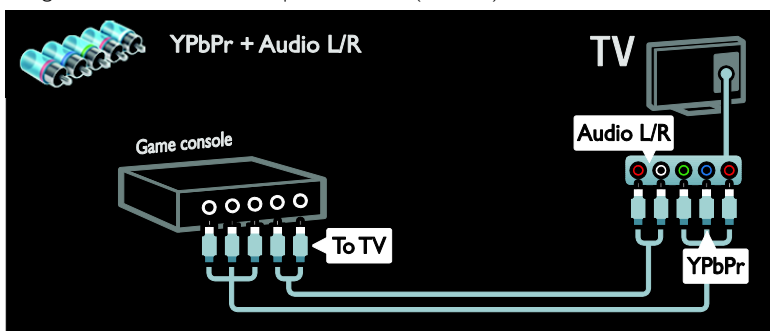
For the best gaming experience, set the TV to game mode.

1. Press **ADJUST**.
2. Select **[Smart picture] > [Game]**, then press **OK**.
3. To exit, press **↩**.

Connect the game console with an HDMI cable to the TV.

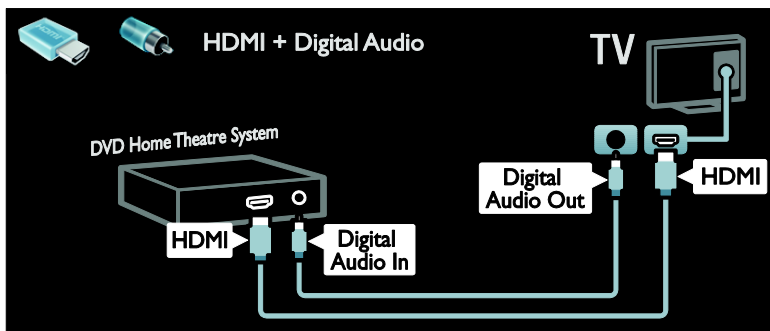


Connect the game console with a component cable (Y Pb Pr) and an audio L/R cable to the TV.

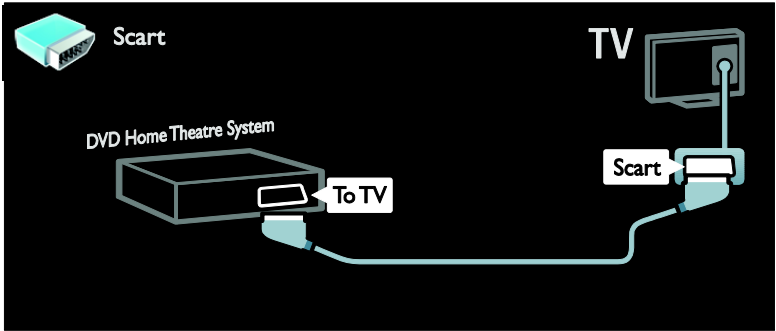


Home theatre system

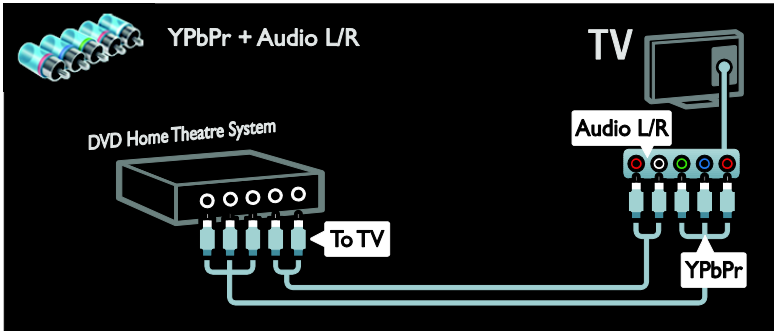
Connect the home theatre with an HDMI cable and an audio cable to the TV.



Connect the home theatre with a SCART cable to the TV.

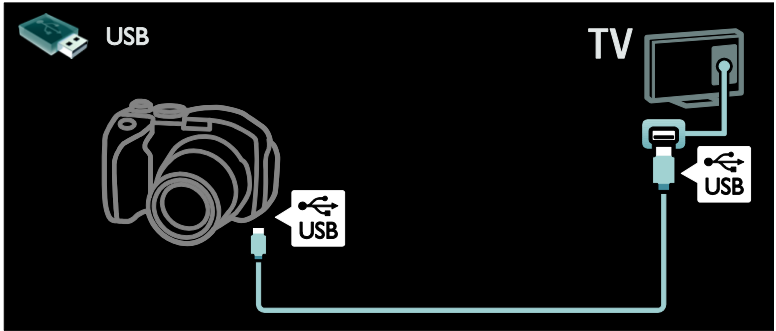


Connect the home theatre with a component cable (Y Pb Pr) and an audio L/R cable to the TV.



Digital camera

Connect the digital camera with a USB cable to the TV.

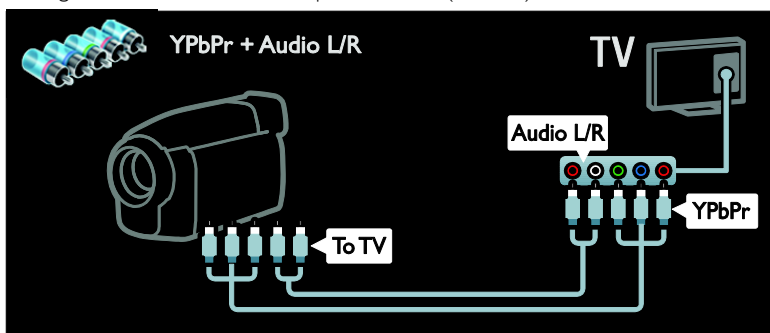


Digital camcorder

Connect the digital camera with an HDMI cable to the TV.



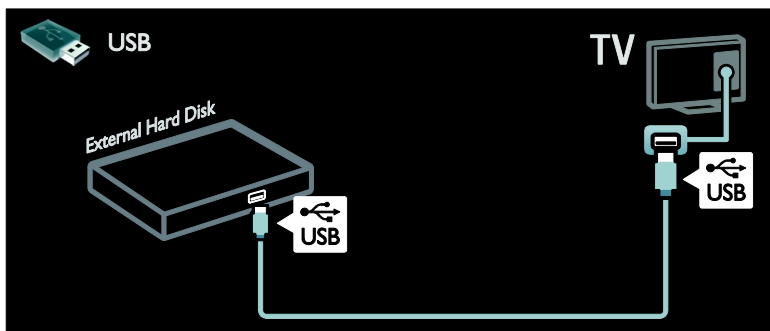
Connect the digital camcorder with a component cable (Y Pb Pr) and an audio L/R cable to the TV.



Connect more devices

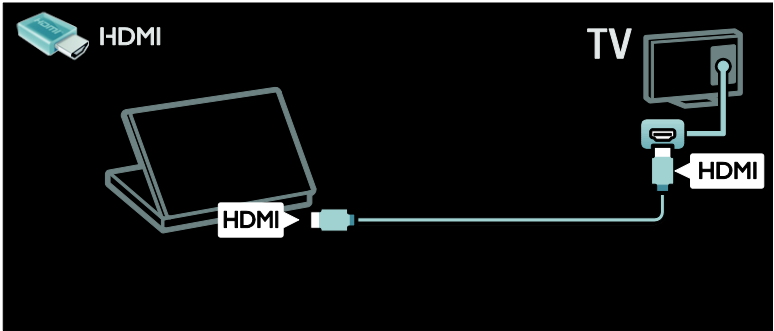
External hard disk

Connect the external hard disk with a USB cable to the TV.

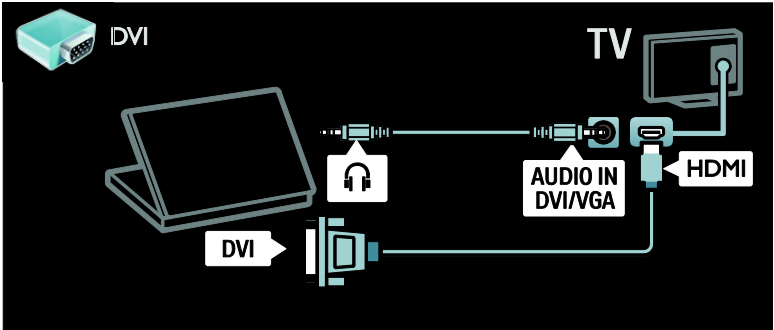


Computer

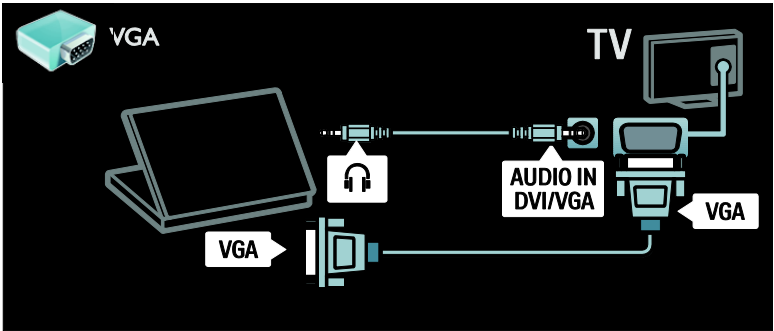
Connect the computer with an HDMI cable to the TV.



Connect the computer with a DVI-HDMI cable to the TV.



Connect the computer with a VGA cable and an audio cable to the TV.



Computers and the Internet

What you can do

Network benefits

Connect the TV to your home network, and play photos, music and videos stored on your network devices. See **Use your TV > Browse home network** (see "Browse home network" on page 17).

If your TV is connected to a network with Internet access, you can also access AQUOS NET + content.

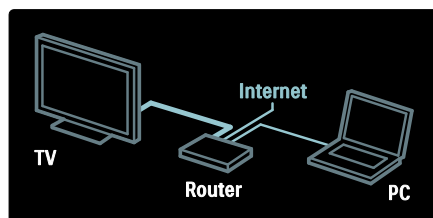
What you need

Warning: This TV complies with the EMC directive only when you use a shielded Cat5 ethernet cable.

To connect the TV to your home network, the Internet or both, you need:

- An ethernet cable that is shorter than 3 metres.
- A computer network that includes:
 - a) A universal plug-and-play (UPnP) router and
 - b) A computer with one of these operating systems: Microsoft Windows XP, Microsoft Windows Vista, Microsoft Windows 7, Mac OSX or Linux.
- To connect your TV to computers, you also need media server software that is set to share files with your TV. See **Use your TV > Browse home network** (see "Browse home network" on page 17).
- To connect your TV to the Internet, you also need a high-speed connection to the Internet.

Connect



1. Switch on the router and switch on its DHCP setting.

2. With the ethernet cable, connect the router to the TV.

Alternatively, you can also connect the router to the TV wirelessly, through a wireless USB adaptor (not included). See **Connect your TV > Computers and the Internet > Wireless LAN ready** (Page 45).

3. Press **MENU**, select **[Setup] > [Connect to network]**, then press **OK**.

4. Follow the onscreen instructions to install the network.

5. Wait for the TV to find the network connection.

6. If you are prompted, agree to the End User License Agreement.

Wireless LAN ready

This TV is Wireless LAN ready. With the Wireless USB adapter accessory (sold separately), you can connect the TV to your home network wirelessly. You can also connect to AQUOS NET + and enjoy the best of the web on your TV, wireless and hassle free.

Make your TV wireless

1. Switch on your wireless network router.
2. Insert the USB adapter AN-WUD630 into the USB connection at the side of the TV. The wireless installation starts automatically.
3. Follow the on screen instructions.

WPS - Wi-Fi Protected Setup

If your router supports WPS (Wi-Fi Protected Setup), press the WPS button on the router. Return to the TV in 2 minutes, select **[WPS]** and press **OK**. The TV connects to your network. This takes about 2 minutes. Complete the installation.

Most new wireless routers have the WPS system and carry the WPS logo. The WPS system uses WPA security encryption and cannot be combined with devices on your network that use the WEP security encryption. If you still need this WEP device in your network, install with **[Scan]** > **[Custom]**.

Scan for routers

If you have several routers in your network, you can select the network you need. To select a specific network router, press **[Scan]** on the first page of the installation.

The routers with WPS and the strongest signal are shown first in the list on screen.

PIN code

To make a secure connection with a PIN code, select the PIN code and press **OK**. Write down the 8 digit PIN code shown on the TV and enter it in the router software on your PC. See the router manual for where to enter the PIN code.

Custom

To enter the encryption key (the security key) manually, select **[Custom]** and press **OK**. If you have WPA security on your router, enter the passphrase with the remote control.

To access the on-screen keyboard, select the text entry field and press **OK**. If you have WEP security encryption, the TV asks for the WEP encryption key in hexadecimal numbers.

Find this hexadecimal key in the router software on your PC. Write down the first key of the WEP keys list and enter it on the TV with the remote control. If the security key is accepted, the TV is connected with the wireless router.

If asked, agree to the End User Licence Agreement.

If you are using the Wireless USB adapter, keep it connected to the USB connector on the TV.

Wi-Fi Ready

Project your PC: Introduction

With the Wireless USB adapter accessory (sold separately), you can connect the TV to your home network wirelessly. To check availability of the wireless USB adapter, contact your local retailer or visit www.sharp-eu.com.

What you need

To use **Wi-Fi Ready**, you need the following:

- Connect the TV to your home network
- A wireless router
- A wireless USB adapter (AN-WUD630)

TV network name

If you have more than one TV in your home network, you can rename this TV. To rename this TV in the network, press **MENU** > **[Setup]** > **[Network settings]** and select the TV network name.

To enter the name, press **OK** to open the on-screen keyboard or use the remote control keypad.

Note

- The playback of video can be affected by your PC performance and your wireless network bandwidth.
- You can project high-definition (HD) or standard-definition (SD) video, depending on the processing power of your PC.
- Due to output content protection, certain commercial DVD or Blu-ray discs may not be projected.

Project your PC: PC requirements

Minimum specifications

- Windows XP, Vista, Windows 7 (PC only)
- Intel Pentium Core 2 Duo 1.8 GHz
- 512 MB RAM
- 200 MB free hard disk space
- Wi-Fi 802.11g
- Internet connection

Project your PC: PC requirements

Recommended specifications

- Windows XP, Vista, Windows 7 (PC only)
- Intel Pentium Core 2 Duo 2.1 GHz
- 1 GB RAM
- 200 MB free hard disk space
- Wi-Fi 802.11n
- Internet connection

Common interface

What you can do

To watch some digital TV programmes, you need a Conditional Access Module (CAM).

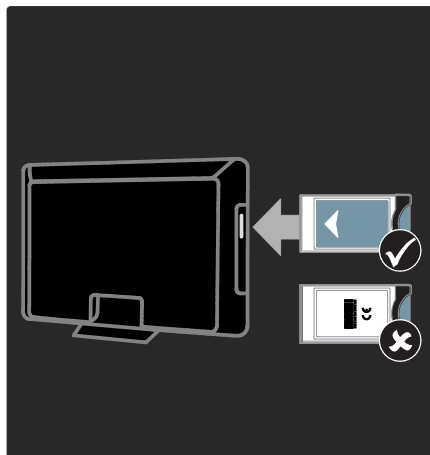
If a CAM is inserted and subscription fees are paid, you can watch the channel. The applications, functions, the content and the onscreen messages vary for each CAM service.

What you need

Caution: To protect the CAM from damage, insert the CAM according to these instructions.

Notes:

- This TV supports CI as well as CI+. CI+ allows service providers to offer premium HD digital programmes with a high level of copy protection.
- Refer to the documentation from your service operator on how to insert a smart card into the Conditional Access Module.



1. Switch off the TV.
2. Follow the directions printed on the CAM and insert the CAM into the Common Interface at the side of the TV.
3. Push the CAM in as far as it will go, then wait for the CAM to be activated. This takes a few minutes.

To prevent digital services from being deactivated, do not remove the CAM from the slot when it is in use.

Watch CAM services

1. After inserting and activating the CAM, press **OPTIONS**.
2. Select **[Common interface]**, then press **OK**.
3. Select the CAM provider and press **OK**.

6 Troubleshooting

contact SHARP

Warning: Do not attempt to repair the TV yourself. This may cause severe injury, irreparable damage to your TV or void your warranty.

You can also contact the SHARP service centre in your country for support. Contact information is available at www.sharp-eu.com.

Take note of your TV model and serial number before you contact SHARP.

General TV

The TV does not switch on:

- Disconnect the power cable from the power outlet. Wait for one minute then reconnect it.
- Make sure that the power cable is securely connected.
- Make sure that the **power switch** at the base or back of the TV is switched on.

The TV does not respond to remote control or front controls when switched on

The TV requires some time to start up. During this time, the TV does not respond to the remote control or front controls. This is normal behavior.

The standby light on the TV blinks red:

Disconnect the power cable from the power outlet. Wait until the TV cools down before you reconnect the power cable. If the blinking reoccurs, contact the SHARP service centre.

You forgot the code to unlock the child lock feature:

Enter '8888'.

The TV menu is in the wrong language:

Change the TV menu to your preferred language.


For more information, see **Set up your TV > Menu language** (Page 34).

When you are turning the TV on, off or to standby, you hear a creaking sound from the TV chassis:

No action is required. The creaking sound is due to the normal expansion and contraction of the TV as it cools and warms up. This does not affect performance.

When the TV is in standby, a startup splash screen is displayed, then returns to standby mode:

This is normal behavior. When the TV is disconnected and reconnected to the power supply, the startup screen is displayed at the next startup.

To switch on the TV from standby, press  on the remote control or press any key on the front of the TV.

TV channel

Previously installed channels do not appear in the channel list:

Make sure that the correct channel list is selected.

No digital channels were found during the installation:

- Make sure that the TV supports DVB-T, DVB-C or DVB-S in your country.
- Make sure that the antenna is properly connected and the correct network is selected.

Picture

The TV is on, but there is no picture or the picture is distorted:

- Make sure that the antenna is properly connected to the TV.
- Make sure that the correct device is selected as the display source.
- Make sure that the external device or source is properly connected.

There is sound but no picture:

Make sure that the picture settings are set correctly.

There is poor TV reception from an antenna connection:

- Make sure that the antenna is properly connected to the TV.
- Loud speakers, unearthed audio devices, neon lights, high buildings and other large objects can influence reception quality. If possible, try to improve the reception quality by changing the antenna direction or moving devices away from the TV.
- If reception on only one channel is poor, fine-tune this channel.

There is poor picture quality from connected devices:

- Make sure that the devices are connected properly.
- Make sure that the picture settings are set correctly.

The TV did not save your picture settings:

Make sure that the TV location is set to **Home**. You can change and save settings in this mode.

The picture does not fit the screen; it is too big or too small:

Try a different picture format.

The picture position is incorrect:

Picture signals from some devices may not fit the screen correctly. Check the signal output of the device.

The picture from broadcasts is scrambled:

You may need a Conditional Access Module to access content. Check with your service operator.

An "E-POP" banner displaying information appears on the TV display:

The TV is in **[Shop]** mode. To remove the banner, set the TV to **[Home]** mode, then restart the TV. See **Get started > Position the TV > Location** (see "Location" on page 9).

The computer display on the TV is not stable:

- Make sure that your PC uses the supported resolution and refresh rate. See **Product specifications > Display resolutions** (Page 51).
- Set the TV picture format to **[Unscaled]**.

Sound

There is a picture but sound quality is poor:

If no audio signal is detected, the TV automatically switches the audio output off; this does not indicate malfunction.

- Make sure that all cables are properly connected.
- Make sure that the volume is not muted or set to zero.
- Make sure that the TV speakers setting is selected. Press **ADJUST**, select **[Speakers]**, and then select **[TV]**.
- Make sure that the TV audio output is connected to the audio input on the HDMI-CEC-enabled home theatre system. Sound should be heard from the home theatre speakers.

There is a picture but the sound quality is poor:

Make sure that the sound settings are correctly set.

There is a picture but sound comes from one speaker only:

Make sure that sound balance is set to the centre.

HDMI

There are problems with HDMI devices:

- Note that HDCP (High-bandwidth Digital Content Protection) support can delay the time taken for a TV to display content from a HDMI device.
- If the TV does not recognise the HDMI device and no picture is displayed, switch the source from one device to another and back again.
- If there are intermittent sound disruptions, make sure that output settings from the HDMI device are correct.
- If you use an HDMI-to-DVI adapter or HDMI to DVI cable, make sure that an additional audio cable is connected to AUDIO L/R or AUDIO IN (mini-jack only).

You cannot use Link operation features:

Make sure that your HDMI devices are HDMI-CEC compatible. Link operation features only work with devices that are HDMI-CEC compatible.

If an HDMI-CEC compliant audio device is connected to the TV and the TV does not display any mute or volume icon when the volume is muted, increased or decreased.

This behaviour is normal when an HDMI-CEC audio device is connected.

USB

USB device content is not displayed:

- Make sure that the USB storage device is set to **Mass Storage Class** compliant, as described in the storage device's documentation.
- Make sure that the USB storage device is compatible with the TV.
- Make sure that the audio and picture file formats are supported by the TV.

Audio and picture files do not play or display smoothly:

The transfer performance of the USB storage device may limit the data transfer rate to the TV which causes poor playback.

Network

AQUOS NET + does not work

If the connection to the router is properly set up, check the router connection to the Internet.

Home network or AQUOS NET + access is slow.

Refer to your router's user manual for information on transfer rate and other factors of signal quality.

You need a high-speed Internet connection for your router.

Wireless network is distorted or not found.

- Make sure that the wireless network is not disturbed by microwave ovens, DECT phones or other neighbouring Wi-Fi devices.
- If the wireless network is not working, try a wired network connection.
- For DLNA connection, click on **How does sharing change firewall settings** in the **Media Sharing** window for the Help file.

7 Product specifications

Power and reception

Power

- Mains power : AC 220-240 V~, 50-60 Hz
- Standby power : <0.15 W
- Ambient temperature: 5 to 40 degrees Celsius

Reception

- Antenna input: 75 ohm coaxial (IEC75)
- TV system: DVB COFDM 2K/8 K,
- Video playback: NTSC, PAL, SECAM
- Digital TV: MPEG-4, DVB-T (Terrestrial), DVB-C (Cable), *DVB-S (Satellite).
- Tuner bands: VHF, UHF, S-Channel, Hyperband

*Available on certain models only.

Display and sound

Picture/Display

- Display type: LCD Full HD W-UXGA
- Diagonal size:
 - 81 cm/32 inch
 - 102 cm/40 inch
 - 117 cm/46 inch
- Aspect ratio: Widescreen 16:9
- Panel resolution: 1920 x 1080 p, 100 Hz
- Brilliant colour processor+ picture enhancement
- 1080 p 24 / 25 / 30 / 50 / 60 Hz processing
- 100 Hz LCD

Sound

- Output power (RMS): 20 W
- Incredible Surround
- Clear Sound
- Dynamic Bass Enhancement
- Mono / Stereo / NICAM

Display resolutions

Computer formats - HDMI (Resolution - refresh rate)

640 × 480 - 60 Hz
 800 × 600 - 60 Hz
 1024 × 768 - 60 Hz
 1280 × 1024 - 60 Hz
 1360 × 765 - 60 Hz
 1600 × 1200 - 60 Hz
 1920 × 1080 - 60 Hz

Computer formats - VGA (Resolution - refresh rate)

640 × 480 - 60 Hz
 800 × 600 - 60 Hz
 1024 × 765 - 60 Hz
 1280 × 1024 - 60 Hz
 1360 × 768 - 60 Hz
 1600 × 1200 - 60 Hz
 1920 × 1080 - 60 Hz

Video formats (Resolution - refresh rate)

480i - 60 Hz
 480p - 60 Hz
 576i - 50 Hz
 576p - 50 Hz
 720p - 50Hz, 60 Hz
 1080i - 50Hz, 60 Hz
 1080p - 24Hz, 25Hz, 30Hz, 50Hz, 60 Hz

Multimedia

Supported multimedia connections

- USB (FAT or DOS-formatted; Mass Storage Class compliant with 500mA only)
- SD card slot

Supported audio/video files

Multimedia file names must not exceed 128 characters.

- Ethernet UTP5
- Supported image files
- JPEG (*.jpg)

File Extension	Container	Video Codec	Resolution	Frame Rate (fps)	Bit Rate (Mbps)	Audio Codec	USB	DLNA	Net TV	Open Internet	Video Store
.avi	AVI	MPEG4 SP	640x480p	30	3	AAC	Yes	Yes	No	No	No
		MPEG4 ASP	720x576p	30	8	MP3/MPEG1 L2/AC3	Yes	Yes	No	No	No
.mkv	MKV	H.264	1920x1080p	24	20	HE-AAC AC3, MP3, PCM	Yes	Yes	No	No	No
.asf .wmv	ASF	WMV9/MC1 SP	352x288p	15	0.384	WMA	Yes	Yes	Yes	No	Yes
		WMV9/MC1 MP	1920x1080p	25/30	20	WMA	Yes	Yes	Yes	No	Yes
		WMV9/MC1 AP	1920x1080p	24/30/60	20	WMA	Yes	Yes	Yes	No	Yes
.mp4	MP4	H.264 BP	720x576i	15/30	5	AAOHE-AAC (V1&2)/AC3	Yes	Yes	Yes	No	Yes
		H.264 MP	720x576i	15/30	10	AAOHE-AAC (V1&2)/AC4	Yes	Yes	Yes	No	Yes
		H.264 HP	1920x1080i	15/30	20	AAOHE-AAC (V1&2)/AC3	Yes	Yes	Yes	No	Yes
		MPEG4 SP	640x480p	30	3	AAC	Yes	Yes	Yes	No	Yes
		MPEG4 ASP	720x576i	30	8	AAC	Yes	Yes	Yes	No	Yes

Supported audio/video files

Multimedia file names must not exceed 128 characters.

File Extension	Container	Video Codec	Resolution	Frame Rate (fps)	Bit Rate (Mbps)	Audio Codec	USB	DLNA	Net TV	Open Internet	Video Store
.ts	TS	MPEG2	1920x1080p	30	20	MPEG2 L2/MPEG1	Yes	Yes	No	No	No
.mpg .mpeg .vob	PS	MPEG2	1920x1080p	30	20	MPEG2 L2/ MPEG1 L2/AC3 LPCM	Yes	Yes	No	No	No
		MPEG1	352x288	30	1.5	MPEG1 L2	Yes	Yes	No	No	No
.mmb .m	RMVB	RealVideo 8.9.10	848x480	30	2	RA8LBR/RAAC	Yes	No	No	No	No

Supported DLNA-compliant media server software

- Windows Media Player (for Microsoft Windows)
- Twonky Media (for Microsoft Windows and Mac OS X)
- Sony Vaio Media Server (for Microsoft Windows)
- TVersity (for Microsoft Windows)
- Nero MediaHome
- DiXiM (for Microsoft Windows)
- Macrovision Network Media Server (for Microsoft Windows)
- Fuppes (for Linux)
- uShare (for Linux)

Connectivity

Rear

- EXT 1: SCART (RGB/CVBS)
- EXT 2: Component (Y Pb Pr), Audio L/R
- SERV.U: Service port
- AUDIO IN: DVI/VGA stereo 3.5-mm mini-jack
- SAT (DVB-S): Available on certain models only.

Bottom

- Network: Ethernet
- DIGITAL AUDIO OUT: Coaxial
- HDMI 2: HDMI
- HDMI 1 ARC: HDMI Audio Return Channel
- Antenna: 75 ohm coaxial
- VGA: PC input

Side

- Common Interface: CI
- SD card
- USB
- Headphones: Stereo 3.5-mm mini-jack
- HDMI

Dimensions

Note: Dimensions and weights are approximate values only. Design and specifications are subject to change without notice.

Legend for TV dimensions

The legends used to indicate the TV dimensions are as follows:

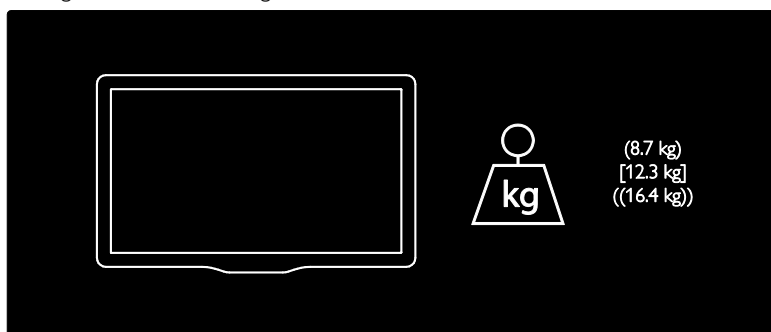
() : 81 cm / 32 inch TV

[] : 102 cm / 40 inch TV

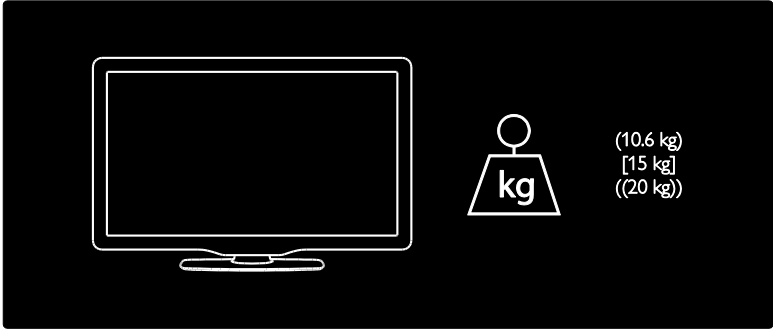
(()) : 117-cm/46-inch TV

Take a note of the legend that corresponds to your TV. Then, go to the next page to view the dimensions.

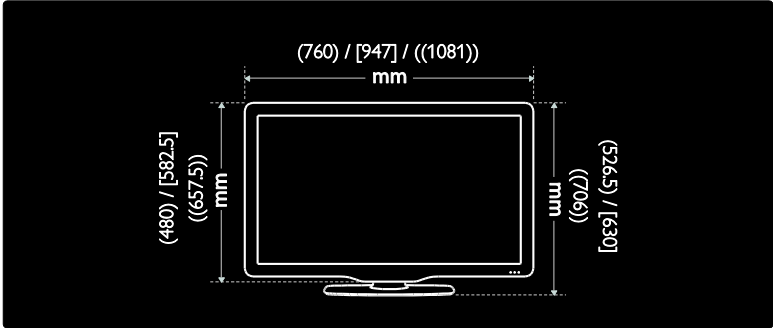
Use your TV legend to note the weight of the TV without the stand.



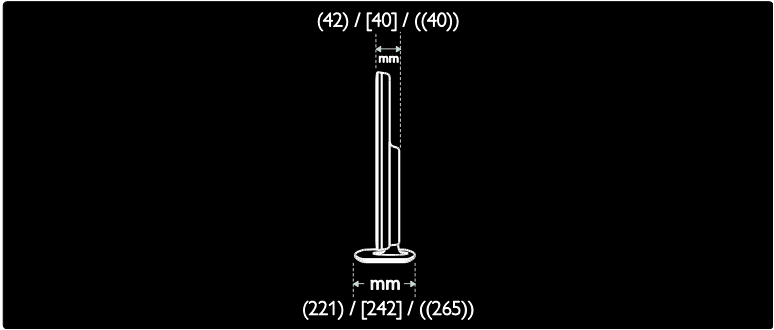
Use your TV legend to note the weight of the TV with stand.



Use your TV legend to note the dimensions of your TV (with and without the stand).



Use your TV legend to note the thickness of your TV (with and without the stand).



Help version

UMv 0000 000 0001- 20110427

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